

Lucerna

Roman Finds Group
Newsletter **42**

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Notes for contributors

Contributions are always welcome – particularly on new finds –so please send them to us, and share them with the rest of the Roman Finds Group!

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Editorial

Welcome to the 42nd edition of Lucerna. In this edition we have an article on bone hinges from Piddington and a plea from Donald Mackreth to rehome some brooches. Following the publication of his book, Donald will be supplying us with notes on brooches and one already awaits publication in the next Lucerna. It is great to have more notes and the longer article by Stephen Greep in the newsletter. Similar contributions are always welcome!

An account of the successful autumn meeting in York is given by Jenny Hall, Angela Wardle and Michael

Marshall. Our next two meetings will be held in Reading (19th March) and Vindolanda (5th-6th October). We hope that the early notice of the Autumn meeting will allow as many members as possible to plan ahead and attend what should be a very interesting meeting.

Emma Durham

Membership

Please remember that membership is due in October. Membership is still only £8 (for individuals) and £11 for two people at the same address. Standing order is also available, please ask Angela for a form or print one from the website.

In order to reduce costs and keep members better informed, we would be grateful if members could provide an email address. This will only be used to relay up and coming information on events such as the study days and the newsletter will continue to be printed

A Claudian Pit Group of bone hinges and box fittings from a ‘Military’ latrine pit beneath the Piddington phase 1b proto-villa

Circumstances of discovery

Two early latrine pits, located at right-angles to each other, were found within what was to become the later villa courtyard and adjacent to, but earlier than, the later two phases of proto-villa (see Fig. 2). They were within what is now thought to have been part of a possible ‘works depot’ outside, i.e. to the west of, a large Claudian fort located to the east of the

two Proto-villa structures and the later stone-built villa. These pits measure, 2.10m by 0.25m (context 1786) and approximately 1.25m square by 1m deep (context 1852; Fig. 1). Pit 1852 was cut by the foundations of the south-west corner of the phase 1b proto-villa, dated to c. AD 70-75. It was filled with a fine greenish grey silty soil. Located at each corner of this pit were 4 postholes c.25cms square. Around the perimeter of the pit, the soil was a noticeably darker colour and probably represents the fill behind planking, secured at the corners by the four posts. It was from this pit that the subjects of this paper were recovered. Latrine pit 1786 had no datable finds to stratigraphically link it to pit 1852, but they may be related to each other.



Fig. 1. Latrine pit (1852) under excavation showing the stone foundation of the corner of the Phase 1b Proto-villa.
(Photo: Roy Friendship-Taylor)

The builders of the phase 1b proto-villa were evidently aware of the softness of the ground, or perhaps there was a sinkage hollow in and around the earlier latrine pit, when they were constructing the foundations for the linking building between the two earlier phase 1a buildings to the north and immediately to the south (Fig. 2). At the north-east corner of the latrine pit, exactly where the corner of

the phase 1b building turned eastwards to join with the earlier phase 1a buildings north wall, it was evidently thought necessary to place a substantial stone foundation within the latrine pit’s southeast corner – although, fortunately, not completely to the bottom of the pit, where most of the bone hinge pieces and copper alloy box fittings were found (Fig 3). The bronze fittings were recovered from immediately underneath the bone hinges. The only

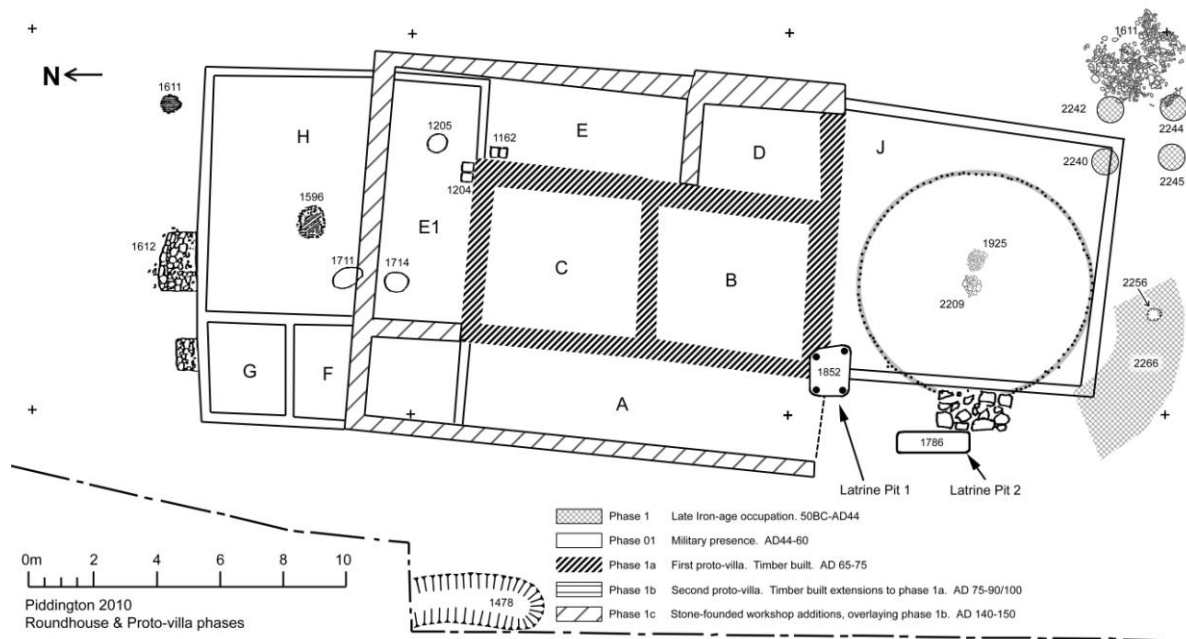


Fig. 2. Plan of the proto-villa phases 1a-c and the earlier roundhouse (Phase 1) at the junction of the phase 1a and 1b proto-villas, together with the two earlier latrine pits. Drawn by: Roy Friendship-Taylor & Marc Line



Fig. 3. The bone box hinges, together with copper alloy fittings – minus 7 copper alloy nails and a copper alloy disc. (Photo: Roy Friendship-Taylor)

other finds from the pit were a samian sherd of a South Gaulish Drag. 18 plate of pre-Flavian date and some coarse ware pottery sherds.

The Finds

Catalogue of related finds:

-
- 6 Complete bone hinge pieces.
 - 1 Half of a bone hinge piece.
 - 2 Non-joining fragments, probably from the same bone hinge piece.
 - 1 Copper alloy strap, (Measuring: 235mm x 50mm) from the front face of a probable box with 6 copper alloy nails still attached (11 nails in total and 5 nails missing – making 6 nails within the copper alloy strip in situ) .
 - 7 Copper alloy ‘bobble-headed’ nails.
 - 1 ‘Bell-shaped’ stud – complete with central nail.
 - 1 Copper alloy disc – presumably fitted at the base of the ‘bell-shaped’ stud.

The bone hinges – form and function.

The most interesting finds from the pit are the remains of the hinge mechanism from an item of wooden furniture, most likely a bronze bound, hinged cupboard, box or casket (see below). The principal evidence consists of a group of eight, single perforated, bone ‘hinges’. Of the eight, seven certainly appear to be from the same object as they are of similar dimensions (six are between 31 and 32mm in length and 26mm and 27mm in diameter; another is 33mm long and 29mm in diameter; all have a single perforation of 7mm diameter¹). One further example, although of similar dimension has no visible perforation and is of slightly different colour raising the possibility that it does not belong to this group. As with all examples from Britain (and beyond) they are fashioned from the central sections of *bos metatarsals*, turned on a lathe and perforated, the Piddington examples with a single, drilled hole, although double perforated examples are also well recorded.

It is likely, that wooden hinges of this form were more common and the benefits of bone construction are not all that clear. There is also the possibility of bone hinges being used in conjunction with darker

coloured woods (Mols 1999, 107-9). There are wooden examples from items of furniture from Herculaneum (Mols 1999) and on casts of wooden cupboards from Boscoreale (Deonna 1934) and Pompeii (Fremersdorf 1940, Abb. 8-9). The double-perforated and larger hinges (see below) commonly had their turned groove decorations inlaid with a black wax based material and there is the possibility that all hinges were waxed to provide colour and possibly to aid movement (Schmid 1968).

In the British literature these objects have been described variously as flutes, whistles, cheek-pieces, toggles and handles or ascribed to some weaving function. Scott (1938, fig. 21, 12 and 14) in a short discussion of two pieces, preferred to leave their identification open, although he cites Beulé’s early identification of their use as hinges (Beulé 1870, 618-9). Beulé refers to ‘thousands’ of cylinders pierced with one or two holes collected from Pompeii and that although they were referred to as flutes in the catalogues, a plaster cast of a large chest, made by Fiorelli, had already determined that they were, in fact, hinges and that examples were known from tombs in Italy and Greece.

The most commonly cited references to illustrate how these objects worked are Fremersdorf (1940) and Schmid (1968). Both based their discussions on examples found at Vindonissa, where examples were found still retaining their wooden fixing pegs, central spindles and wooden packing. However, in reality there had been a number of earlier identifications prior to these publications, in addition to that by Beulé noted above, Fiorelli had also published correct identification in 1877 (Mols 1999, 107). Deonna (1934) also published a discussion on the function of these pieces based upon a plaster cast of a cupboard from Boscoreale. In British literature, Waugh and Goodburn (1972, 149-50) correctly identified their function in a discussion of hinges from Verulamium, but the best summary of function of both single and double perforated hinges, remains that detailed by MacGregor (1985, 203-5).² Here, Figure 4 is a stylised representation of how the Piddington hinges would have worked, and a more readily accessible

¹ Finds from Britain vary between 22mm and 41mm in length (Greep, 1983, fig. 54) with most being between 26mm and 36mm. The size of the hinges is, of course, partly dictated by the material they utilise. See also the size distribution table of examples from Lyon in Béal, 1983, 126.

² There have been various other explanations of their use as hinges e.g. in *Lucerna* 2 (1989) Christine Jones published (see also Jones 1984) and identified these forms as elements of box and furniture hinges and more recently Croom (2007, fig. 62) has illustrated how they function in her chapter on cupboards and shrines.

account of the wooden packing of examples from Vindonissa can be found in Mols (1999, 107-8). There are also detailed discussions in more recently published site collections (e.g. Béal 1983, 101-126; Mikler, 1977, 62-5; Obmann 1997, 57-60).

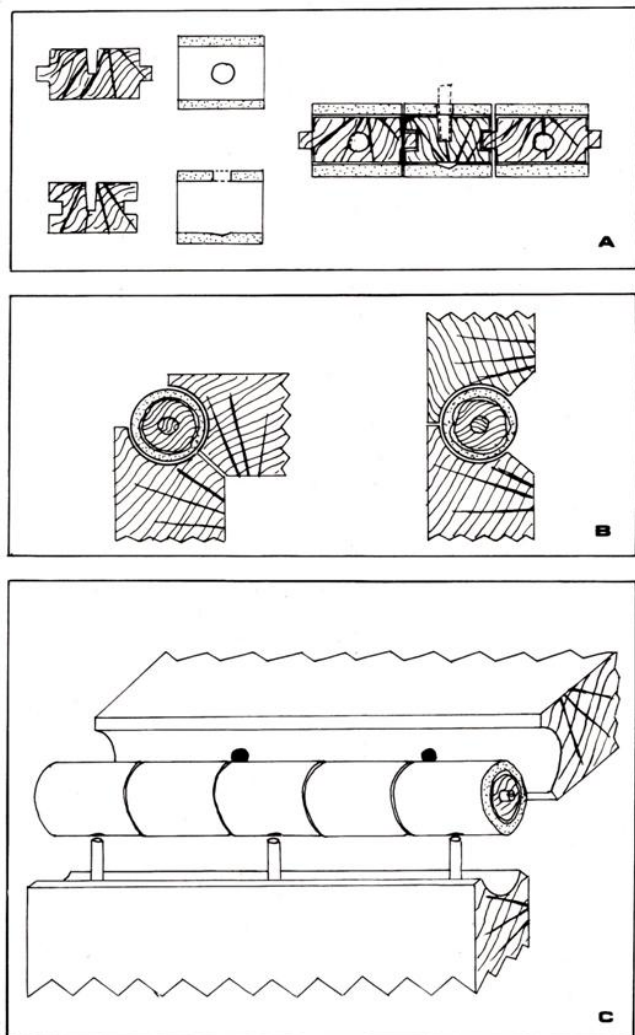


Fig. 4 Illustration of bone hinge construction (reproduced from Frère-Sautot and Béal 1980, pl. 1)

The first correct identification published in English of the function of these forms was, however, in 1929 by Hull who, in the discussion of the Colchester 'pottery shop' although not illustrating any examples, noted (1929, 286) that 'there is a number of the short bone cylinders which I believe are held to have been used as hinges'. He was presumably following Price who, in an unpublished catalogue of the Acton Collection, notes under numbers 1288-9 'Two portions of bone flutes, are with two lateral openings, the other with only one, found at Colchester in the Green, 1853. In writing of such objects Mr Roach-Smith has remarked that such

objects are reasonably called flutes to which they bear a resemblance but with some reason it has been conjectured that they were used in weaving. As regards the smaller specimens with one aperture only, and that in the centre there is little doubt that they ... as hinges to bone dressing cists or caskets, the hole ... for the reception of a peg. I have seen such objects in this position in some beautiful bone caskets preserved among the collections of Roman antiquities at Rome and elsewhere' (Price 1884).

These finds are reasonably common in Britain,³ but normally they are recovered as single, isolated finds, divorced from the original object of which they formed a part. Apart from the Piddington find, an exception⁴ to this was found in the Welwyn Type burial at Stanfordbury where a group of five single hinges and a single 'double' hinge were recovered (Stead 1967, 55). Although there is no other example of single and doubly perforated hinges occurring together in Britain, an example from the *aedicule* of the House of the Wooden Partition in Herculaneum has a double-door cupboard with each door suspended by six (wooden) single perforated hinges, seven 'spacers' of the same size with each end being 'finished' with a larger double perforated hinge (Mols 1999, fig. 145). Mols also points to the painting in the tomb of *Vestorius Priscus* in Pompeii and on a drawing of the now lost plaster cast of the cupboard from Boscoreale, in which 34 small cylinders are closed off by two large ones.

There are other examples of groups of apparent bone hinge arrangements occurring together – typically from funerary contexts. For example, there are finds from Cologne (Fremersdorf 1940, Abb. 13; Mikler

³ In my (unpublished) doctoral thesis (Greep 1983) I listed 87 examples of the type represented at Piddington. Finds published after this date (including the present examples) have increased this number to well over 100. Apart from Britain I have noted published examples from Austria, Belgium, France, Germany, Greece, Israel, Italy, Netherlands, Spain and Tunisia. Presumably, therefore, a more detailed study of other provinces would reveal that these forms are consistently found throughout the Empire. Recently published catalogues from the continent provide a considerable number of parallels – Lyon (Béal 1983), Mainz (Mikler 1997), Nida-Heddernheim (Obmann 1997), Augst (Deschler-Erb, 1998), Magdalensburg (Gostenčnik 2005) and Avenches (Schenk 2008).

⁴ There is also a record of a single hinge and decorated end arrangements from a Roman burial in Bexley – inf. Paul Sealey, and Tester, 1973, 88, although the hinge elements are not illustrated there.

1997, Abb.7), Apt (Dumoulin 1964, 16) and Colchester (Hull 1963, fig. 81; later 2nd century cremation) which have apparent elements or hinged arrangements occurring together. However, these all include elements of hinge ‘blockers’ and spacers’ which do not occur anywhere in the Herculaneum and Pompeii sequences in association with any of the typical single perforated hinges. Grave finds from tumuli at Walsbetz (Fremersdorf 1940, Abb. 20) and Helshoven in Belgium do apparently link end pieces, blockers and double perforated hinges (e.g. Mikler 1997, Abb. 8), but the hinge arrangements are also different to that represented at Piddington and elsewhere (see Obmann 1997, Abb. 6 for a reconstruction, based on Fremersdorf 1940, Abb. 23-26). The relevance of all these finds to the current discussion is therefore uncertain. That only ‘part sets’ of hinge arrangements were recovered from each of the graves cited above (all were cremations) presumably indicates that the remains were recovered from the pyre rather than from incomplete objects placed in the grave.

Chronology of bone hinges

The origin of the hinge arrangement is not entirely clear, but certainly pre-dates the imperial Roman period. Watzinger illustrates a number of Hellenistic Egyptian sarcophagi which utilise this method (Watzinger 1905; Fremersdorf 40, Abb. 17) whilst Richter shows this method in use depicted on Greek figure vases (1966, 385 and 395-9) and also on a small bronze chest (*ibid.*, 403-4) dating back to at least the late 5th to 4th centuries BC. Waugh & Goodburn (1972, Pl. XLIX) illustrate two examples of wooden boxes or caskets with wooden hinge arrangements from the Hellenistic period in the Fayûm in Egypt and Mols (1999, 109, fn 693) gives references to a number of other examples of this period. Mols (*ibid.* fn 694) also cites examples from the Greek archaic period. Possible hinge segments are also, amongst the Nimrud ivories (Barnett 1957, pl. CVIII, 5370) of the 9th to 7th centuries BC, which suggests that the use of hinges in this fashion might be several hundred years older. There may also be an example of hinges, in ivory, from a wooden diptych in three sections from the Ulu Burun shipwreck dating to the 14th/13th centuries B.C. (Mols 1999, 109). Some writers have attempted to identify a Celtic use for the hinge form (e.g. Obmann 1997, 57). However, closer examination of those types referenced from Britain (e.g. Sellwood 1984 fig. 7.31; Cunliffe and Poole 1991, fig. 7.30) demonstrate that these are smaller,

of irregular shape (and hence could not have ‘turned’), are often of antler rather than bone and normally decorated with ring and dot ornament. At least those from Britain are therefore not examples of hinge arrangements and although they are normally described simply as ‘toggles’ their true function remains unclear. Whatever the precise ancestry of this Piddington form of hinge arrangement, however, it was clearly of considerable antiquity when it was adopted by Roman craftsmen.

The dating of these forms in Britain is consistently early within the Roman period and the Claudian date from Piddington fits well with evidence from elsewhere. The examples from Burial A at Stanfordsbury noted above date to the period *c.* AD 43-55 (Sealey 2009, 33-4) and there are other pre-Flavian examples from Verulamium (Richardson 1944, pl. XVIII, 1-2) and Colchester (Crummy 1983, fig. 132, 4096). There are early examples of double perforated hinges – an example of the double perforated hinge from the Magdalensburg (Gostenčnik 2005, Taf. 33, 3) is probably Augustan and a Claudian example is recorded from Port Vendres (Colls *et al.* 1977, Pl. 50). It is possible, however, that the arrangements utilising larger, double perforated hinges, spacers, and terminals represented in the grave finds listed above might have a chronology and function separate to that represented by the Piddington type. More dating evidence is required to be sure.⁵

The end date for the Piddington form is more difficult to determine. There are a number of examples from Walbrook deposits in London (unpublished, Museum of London) which are generally dated *c.* AD 50-150 (Merrifield 1962). An example from Caerleon (Nash-Williams 1928, fig. 18,12), associated with the earlier stone phases of the fort ought to be second century, while one from Chesters (unpublished, Chesters Museum) should be post *c.* AD 120. There are two examples from Verulamium dated *c.* AD 145-60 (Frere 1972, fig. 54, 188 and 190), and one from Watercrook from contexts of *c.* AD 150-170 (Potter 1979, fig. 88, 93) There are also British examples from contexts into

⁵ A speculative theory might be that single and double hinges were commonly used in the 1st century, but single perforated hinges (or the objects which used them) were ‘phased-out’ and the more ‘heavy duty’ doubly perforated hinges, together with blocking discs and terminals as found in the graves listed in the text, took over, lasting into the 3rd century.

the 3rd (e.g. Waugh & Goodburn 1972, fig. 54, 189) and 4th centuries (Greep 1986, fig. 76, 35) but it is unclear how many, if any, of these are well stratified.

The evidence from the Continent does not conflict with that from Britain. There is considerable supporting evidence for an early date for the single perforated hinges from very numerous finds from Pompeii and Herculaneum (see above; there are also hundreds of unpublished examples in the Museo Nazionale, Naples and from more recent excavations). The find spots of bone hinges from Herculaneum are listed by Mols (1999, 107 with further references). They are present in 1st century contexts from Vindonissa (e.g. Fremersdorf 1940) and at Augst they were considered mainly a first century form (Descheler-Erb 1998, 181-189 & 289), but with later survivals. Mikler (1997, 65), in a discussion of the continental evidence, dates the forms to the 1st to 3rd centuries, a date range supported by other discussions of the non-British material. For example, while supporting the general 1st-3rd century date, Obmann (1997, 60) notes the evidence from Hedderheim suggests a 2nd century date and further notes that finds from the Netherlands were dated by Hupperetz (1991) between c. AD 130-200. The sarcophagus from Simpfeld in the Netherlands (Fremersdorf 1940, Abb. 14; Mols 1999, fig. 10) of c. AD 175-225, may depict a cupboard with cylindrical hinges.⁶

On present evidence, therefore, there is plentiful evidence for the use of bone hinges of the Piddington type in the 1st century AD with survival at least to the middle of the 2nd and possibly beyond.

The bronze

Together with the bone hinges in the pit was a bronze sheet, 235mm in length 50mm wide. There were six bronze nails remaining in situ, with a further seven in the loose in the fill. There was also a single bronze bell-shaped stud (Fig. 3) with a bronze disc which was presumably associated with it. The bronze fittings were found immediately

underneath the bone hinges, strongly suggesting that they were from the same object.

Bronze sheet such as this are fairly common finds, often associated with boxes and items of furniture (e.g. Riha 2001). A selection of bronze sheet fittings, including dome headed studs similar to those from Piddington, were recovered from earlier Roman contexts at Skeleton Green, Braughing (Borrill 1981, 304-18, 320-1).

Interpretation

During the Roman period, the evidence cited above points to bone and wooden hinges being utilised in various sizes of caskets, cupboards, shrines and even larger door arrangements.⁷ Based on the evidence from Herculaneum, Mols (1999, 108) considers the use of bone hinges as decorative and thinks that they might have been used in conjunction with wooden hinges. He cites the painting in the tomb of *Vestorius Priscus* in Pompeii, where the hinges are coloured white and brown, as supportive evidence. He further suggests that bone segments seem to come mainly from cupboards and *aediculae* where they were visible, while in chests purely wooden hinged bands or metal hinges were preferred.

The finds from Piddington, even if incomplete, clearly represent a part of a broken wooden (and bone) object discarded into a latrine pit, not long after the Conquest, and possibly during a military occupation of the site. While it is not necessary to assume that the bronze sheet and studs, found immediately beneath the hinges, are a part of the same object their position in the pit suggests that they should be so regarded. Despite Mols' (ibid.) suggestion that bone hinges come mainly from cupboards and *aedicule*, in this case it is therefore most likely that the object in question is a small, bronze bound (or fronted), wooden box or casket which had become broken at some time in the early Roman period and discarded. In all probability the object was of a form similar to that found on a sculpture from Nîmes (Fig. 5).

⁶ Neither of the authors have seen this sarcophagus and while Fremersdorf included it in his discussion, examination of images on the internet (e.g. www.flickr.com/photos/henmagonza/4196459711/in/photostream) is not conclusive – the 'hinges' appear to be in the centre of the cupboard not at the edges of the door, although it could, of course, represent a folding door.

⁷ Mols (1999) points out that despite the inherent weakness of the arrangement for large doors, they are so depicted on the tomb of *Vestorius Priscus* in Pompeii



Fig: 5. Tombstone depicting an open box with bone hinges in use. Sculpture Museum, Nîmes, (Photo: Roy Friendship-Taylor)

As to the number of hinges present in the Piddington pit it is clear that they only represent a part of the hinge arrangement. For example, the double-doored wooden cupboards from Pompeii and Boscoreale noted above both seem to have had 36 elements, on each hinge, but smaller arrangements were clearly possible. At Pompeii, in the atrium of the House of Venus in a Bikini, 32 bone hinges were found in the corner of the atrium, all that remained of a cupboard (presumably with two sets of 16 hinges), with its contents still in situ. In another part of the same room, further hinges were accompanied by bronze fittings (Beard 2008, 91). Wooden cupboards from Herculaneum had 15 (Mols 1999, 194) or 16 hinges on either door (e.g. Schenk 2008, fig. 49). Thus, while the numbers of hinges utilised could vary according to the size of the doors, the maximum total of eight from Piddington are unlikely to have been a complete set, unless they were accompanied by several wooden examples.

Alongside the Stanfordbury Welwyn type burial find, the hinges from Piddington represent an important group of objects from early post conquest Roman Britain. They are part of a lid or door mechanism

which may first have originated in the late 2nd millennium BC, but became common from the Hellenistic period onwards and spread throughout the classical world until the second half of the 2nd century and possibly beyond.

Acknowledgements

We are grateful to Felicity Wild for examining and dating the samian. Nina Crummy and Paul Sealey have helped with checking some of the references used in the discussion and Hilary Cool and Nina Crummy kindly read and commented on an earlier version of this paper.

Roy Friendship-Taylor and Stephen Greep

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Brooches needing a home...

There comes a time when one wants to tidy things up for the final time. One such has arrived with the publication by Oxbow of Donald's Big Book of Brooches for Kiddies and Archaeologists, the working title before the formidable sounding one of Brooches in Late Iron Age and Roman Britain. The correspondence, the working library and the actual card index itself are now deposited with the British Museum.

However, I have a residue of items sent to me for which I have no good idea of to where to send them, or even the sites from which they came. Some arrived with no identification other than a site code. I am now 77 and trying to put all things in order.

I give a list below in the hopes that someone will remember having seen something which might help. I want to get RID of these relics of a past life, so to speak.

- 1 Blue plastic box with no identification containing Paper Tissue housing a rotting Thistle brooch, and another Tissue with the upper part Harlow brooch, designated by me as the Harlow type.
- 2 A Kodak box with the Inscription "Pleshey Castle 1962, Roman Brooch K 26' 8 1/2" J 17' 1", Layer W Base (under 3 – 4" of W) B.O.(5)". This was from Philip Rahtz's excavations and sent to me by whoever processed his finds for him. The object is a Harlow Type with a triple pierced catch-plate. Who wants this?
- 3 Modern plastic finds box inscribed SLT 99, Saltwood Tunnel /99, (2710) Find No. 1851,

CA Brooch, 4 frags". Parts of a single Harlow Variant type with a circular hole in the catch-plate. From Kent Arch Trust, but where are the finds lodged?

- 4 Modern plastic finds box inscribed "MLA 99 MT-Cu Alloy Brooch [044]". A Harlow variant with two piercings in the catch-plate.
- 5 Small plastic finds box inscribed "Lead model Brooch?" containing Minigrip bag inscribed "Calvin Wells NMD Oct '02 36591 Elsing". Upper part of a lead pattern with hand hold on the back for impressing in clay. Colchester Derivative short stubby wings with the upper bow having one or two mouldings on either side.
- 6 Minigrip bag inscribed "30864 BVK, sf.97", containing a piece of paper with the same inscription and the badly pitted upper part of a brooch of Harlow spring-fixing arrangement.
- 7 Minigrip bag containing a card index card inscribed "Orston Brewsters Field, C. D. Smith, 1990, (117)", and with a large Aucissa, uninscribed. This was part of a large batch of brooches passed to me by the late Jeffrey May. My impression was that he had them directly from the finders and that they did not pass through the Archaeology Department at Nottingham University.

Please reply with information to dfm@globalnet.co.uk, thank you!

Donald Mackreth.

RFG SPRING MEETING

Department of Archaeology, University of Reading
Monday 19 March

The theme for the day is new insights onto old sites, whether newly excavated material or rethinking previously examined finds.

10.20-10.25 Intro
10.25-10.50 Hella Eckardt: New light on Lankhills
10.50-11.15 Ed McSloy: Recent work at Bridges Garage Site, Cirencester

11.15-11.45 Coffee

11.45-12.10 Justine Bayley: Revisiting the crucibles from Chapel Street, Chichester

12.10-12.30 Evan Chapman: Taking Stock of the Blocks: Investigating the armour found during the 2010 excavations at Caerleon

12.30-1.30 Lunch

1.30-2 AGM (a chance for members to discuss the future of the group)

2-2.25 Emma Durham: The Silchester Eage
2.25-2.50 New finds from Silchester

2.50-3.20 Coffee

3.20 to close. Recent finds from the Silchester Insula IX excavations will be on display

For further information contact Emma Durham. The booking form can be found online at www.romanfinds.org.uk

RFG AUTUMN MEETING 2012

Vindolanda Roman Fort and Museum

Friday October 5th – Saturday October 6th 2012

Our Autumn Meeting will be based at the Roman Fort and Museum at Vindolanda, from 13.00 on Friday 5th October until 13.00 on Saturday 6th October 2012. There will be four sessions of papers, two sessions on finds from Vindolanda and two sessions on finds from other sites in the north. There will also be a guided site tour and an opportunity to hear about the development of the Museum.

Recently excavated material from Vindolanda and elsewhere will be on show with a private Museum viewing (with drinks reception sponsored by the Vindolanda Trust) of the new multi-million pound development. The meeting will be held in the new Hedley Centre at Vindolanda where some accommodation is available. Local transportation may also be available on a first come first served basis. Overall numbers will be restricted, but with price reductions for RFG members. The Vindolanda Trust will also provide free access for delegates to the Roman Army Museum post meeting. Please pre-register by emailing Stephen Grep at sjgreet@gmail.com. Full details will be available to all those who pre-register or whose email address is held by the Membership Secretary, over the next two months. Full details will also appear in the next *Lucerna* due for publication in July.

Could you Tweet for RFG?

We would like to run an occasional Twitter feed, along the lines of that so brilliantly done by @findsorguk (Portable Antiquities Scheme) or @FindResearchGrp (Finds Research Group AD 700-1700).

If you have an interest in Roman finds, are savvy with social media and could spare a small amount of time a week to run this feed for us, do please contact nicola.hembrey@english-heritage.org.uk.

Thank you!

RFG AUTUMN MEETING 2011

In collaboration with the Finds Research Group, the Historical Metallurgy Society and York Archaeological Trust

York – 18th October 2011

Anglo-Saxon jewellery

Susan La Niece, Metallurgist, British Museum

In the 5th-8th century, there was an interest in inlays and inlay techniques but how did they originally look and how were these intricate pieces constructed? The Anglo-Saxon love of colour and decoration can be compared with the initials in manuscripts of the period. They both have interlaced designs and filigree panels. Much of the jewellery of the time was characteristically made of gold with cloisonné garnets. The style of inlay can be found from the Black Sea to Anglo-Saxon England.

The cell walls to the inlays were made of metal strips, placed on edge and soldered to a backing plate. Garnets filled the cells. Some copper alloy or silver cell work was merely impressed into the backing plate rather than being soldered. Groups of garnets are found in archaeological assemblies. However, it is difficult to provenance garnets. Garnets were polished – this seems to have been done by sticking groups of rough stones to resin and grinding them down. They were polished en masse. Some were cut with chamfered edges, others were chipped to shape - the thinner the garnet, the better the colour. The garnets were pushed into the cells and then the edges of the strip were rubbed down over the top.

Foils made of gold, silver or silver gilt were very, very thin. Patterns were stamped onto the foil. Dies for stamping some of the patterns have survived. It is thought that the foil was tapped by the die while resting on a leather pad to cushion it. A variety of styles, criss-cross, waffle patterns and the like were used. In surviving examples, the foil has sometimes gone but the impression has been left on the backing pastes. Pastes were made from fine quartz sand or a calcite base bound by beeswax. By using them it gave an illusion of thicker stones (garnets). Sometimes there was no backing paste but it was down to the supreme skill of the craftsman. Glass inlays, blue, opaque or transparent were mounted like garnets. They re-used Roman blue and green glass to mimic emeralds and sapphires. Millefiore glass, produced in the Roman tradition, was also used.

Some examples were shown. They included a gilt silver brooch from Wingham, Kent. It had inlays of red (garnet), white (shell) and blue (opaque glass) with niello decoration (silver-copper sulphide). The Sutton Hoo jewellery was made with silver sulphide like the Romans used. It had white inlays with garnets. White inlays were made of various materials. Shell was the most common, cut as cabochons. The shells have been identified as large marine gastropods that did not come from British waters. The second type was magnesium carbonate (magnesite) and this was produced with a flat surface. More unusually, bone or ivory was used, either elephant or walrus, for high-status items. These organics all tend to be stained green by copper salts.

There were inlays within inlays – for example, simple gold rings were set into a magnesite background. Garnet inlays are found within magnesite inlays and gold rings were even set into garnets or niello. Although most of the materials (eg garnets and ivory) used were exotic, local substitutes were used. Enamel inlays were used as a substitute for garnets.

The art and mystery of the Cheapside Hoard **Hazel Forsyth, Medieval & Post-medieval Curator, Museum of London**

The term ‘mystery’ was used as a collective noun by the medieval guilds to express their skills and secrets. The Cheapside Hoard, discovered in Cheapside, London in 1912, consisted of nearly 500 jewels and pieces of art. The jewels included some

re-used ancient stones. Little jewellery survives from the Elizabethan and Jacobean period and, therefore, it is essential that further research should be done on this hoard – the current research will lead to a book and exhibition.

The hoard would seem to have been the stock-in-trade for a goldsmith. Analysis of the metal has been carried out and alloys were used with a deliberate choice of alloys for each item. Goldsmiths of the time used touchstones, black slate or jasper, to test the gold. They had 24 needles each coated with a different alloy – it was their way of testing the purity (carat). They would rub the needle on the touchstone and then the object's alloy for visual comparison.

Today we use XRF to analyse the elements. It has been possible to produce a dataset of 16th and 17th century goldwork. The gold was in the main 19.2 carat (22 was the standard in the Elizabethan period). By using laser scanning and a stereo microscope, it has been possible to work out how some of the intricate pieces have been made. There was a wide use of enamelling with wire or toothed setting strips soldered on separately. The solder was put on as balls of solder onto the backing plate. Stones used were either cabochon or faceted. One watch from the hoard was made by G. Ferlite who was originally Italian-Swiss from Geneva. The watch was made c.1626-1630. It has calendar indications, hour striking and alarm with a champlevé enamel dial and a pierced and engraved case. Although corroded it has been possible to produce laser scans of the separate elements and then a working model using laser and hi-resolution imagery.

Understanding iron mail

Sonia O'Connor, Dept of Archaeological Sciences, University of Bradford

Iron chain mail has been made and used from pre-Roman times onwards. There were early Iron-Age ring mail shirts and mail was still in use as late as the 18th century. However, they were penetrable by pointed weapons – bolts and arrows. As arms improved over the centuries, so did armour. Padded hardened leather jackets were worn under mail from the 13th century onwards. Scale and segmented armour died out after the Romans. The chain mail shirt can be seen in the Bayeux Tapestry and is frequently depicted on medieval warrior tombstones. The Normans wore long shirts with long sleeves, leggings and even mittens and caps. Sometimes they wore it under chest armour. From the 13th – 15th

century the use of mail changed and was used in ceremonial settings rather than battle. The shirts were skilfully made with fine iron rings gilded with copper-alloy trimmings.

The good thing about mail shirts was that they were not made to fit one person and they stretched so that they could be worn by any size of soldier. They were also repairable. The ring mail consisted of two types – solid or riveted rings. The riveted rings could be opened to connect to other rings. This gave it some degree of flexibility to stretch to fit. Most mail tended to be made of lapped and riveted rings interspersed in rows with solid rings. The solid rings were stronger and gave more protection to the wearer. The riveted rings were the weak point. Later medieval shirts were more mass-produced, lapped and riveted and, therefore, weaker.

The study of mail began at the end of the 19th century. W Burges published a catalogue of mail and helmets (Arch J 37, 1881) but his method of recording and constructing mail was insufficient. Martin Burgess published ways of charting the method of manufacture (Antiq J 33, 1953). Cyril Smith looked at methods of making chainmail in the 14th-18th century in 'Technology & Culture', 1960. It was first thought to be stamped from sheet but now thought to be welded from wire. The Coppergate Helmet (AD 750-775) was found in waterlogged conditions and had little surface corrosion. A mail protector was attached to the back of the helmet by suspension rings. The helmet was edged by copper-alloy strip with iron wire running through it and the chain was suspended from the iron wire. After cleaning, the chain was fully articulated with copper-alloy rings as a decorative edging. The chain was made of lapped and riveted rings with rows of solid rings. David Sim has suggested that Roman mail was made by punching rings from sheet and then hammering the edges (this makes it D-shaped in section) but the Coppergate Helmet has heat and pressure welds to the rings. Were different mails for different purposes?

X-radiograph and CT scanning is showing up the techniques. This is good because it is non-destructive. Researchers need securely-dated material to be able to make detailed records with an integration of conservation, radiography and metallurgy, using both 2D and 3D radiograph techniques. In conclusion, it was very skilfully made and expensive to produce.

Brazing: using copper alloys for joining and finishing iron objects

**Tim Young, Archaeo-metallurgist,
GeoArchaeology**

Brazing is an iron fabrication technique. To join iron pieces, a filler metal (copper alloy) was used which filled the gaps between two iron pieces at high temperature. It was commonly used in locks, joining the two pieces of iron casing by brazing with copper alloy. Sometimes, copper alloy was drawn over the iron face, such as on animal bells, to both improve corrosion resistance and to close joins. Barrel locks were brazed together by putting copper alloy in the join – this is done when you cannot forge the weld.

Brazing was first recorded by Theophilus in AD 1100. He wrote about two techniques. For small objects, he described putting copper alloy at the join and covering it with clay to hold it together and exclude the air. As soon as it was hot enough, the copper alloy melts and flows into place, producing a seam. The other method was done by mixing a high-tin copper alloy, crushed to a powder, with a flux and painting it around the join and then melting it.

Brazing in the medieval period was confined to padlocks, arrowheads and bells. Animal bells were being made from the Roman period onwards. It has been found that Viking brazed iron weights were wrapped in cloth and then covered by clay forming a ball and then fired. The mould was broken open when cool. Irish religious and animal bells were riveted. They began with a flat forged iron sheet with a curved rod for the handle and suspension loop to take the clapper. The sheet was then shaped into the bell and covered with fabric and clay coating to produce a package. Experiments showed that you have to be careful not to overcook the package in the hearth.

Technology or Design? ‘Enamel’ in the 1st century AD

Mary Davies, National Museum of Wales

Roman enamel was not technically enamel but a type of glass, applied by vitrification to metallic or other hard surfaces for ornament. The 1st century saw a clash of cultures and technology. Celtic objects were inlaid with glass. The constituents of glass were silica, flux (soda or potash) and a stabiliser (calcite). Roman glass tesserae from the Mediterranean are similar to that found in British late Iron-Age objects.

Pliny said that the Levant was the source for white sand and, indeed, eastern Mediterranean sand contains shell (i.e. calcite) and is very white (no iron content). Raw glass, both blue-green and coloured was traded as ingots. A very deep opaque red (known as ‘sealing wax red’) was produced and examples of objects with this glass can be found across Europe and Britain but not around the Mediterranean. The red was made by adding copper and antimony or iron to the basic mix. Lead was also added to soften it to make it melt at a lower heating point.

In the late Iron Age inlaid coral was also used for a similar effect. The Battersea Shield and Waterloo Helmet used red glass that had been given a polished surface. In the 1st century BC, the glass-blowing technique was introduced and glass was being made in industrial quantities. It, therefore, changed in use. Bronze also became more widely available and objects were cast. Inlaid objects are often found in hoards from the mid – late 1st century. They tend to occur in tribal areas at war with Rome – such tribes as the Novantae, Silures, Durotriges, Brigantes and Iceni. The objects display native Iron Age styles of metalwork.

Enamelling, with a low lead content to distinguish it from the glass was introduced. Iron-Age artefacts tend to be made of pure bronze without lead. They used the lost wax method and objects were predominantly horse and chariot equipment. Romano-British artefacts were made of bronze, brass and gunmetal and used polychrome enamels.

Ed note: It is hoped that a fuller article will be forthcoming in a later issue of Lucerna

New light on the Stanwick Hoard

Frances McIntosh, Newcastle University and PAS

The original Stanwick hoard of 141 objects was found in 1843 by a farm labourer about 1km from the Stanwick earthworks. In 2011 these were added to by a metal-detector who found 1 coin, 24 objects, 25 fragments consisting of terrets, a strap slide, mounts, a button and loop fastener, mail-related items and a torc. The surfaces were corroded. They seem to be possible mis-casts and unfinished items which have either lost their enamel or have been prepared to take enamel.

There are a number of similarities with the 1843 hoard – the harness, faulty castings and circular hollows. However, there are also differences – different styles and designs. The recent find has no repousse work and it has more waste pieces. All the items are cast. Hollows had been cast integrally for ‘inlay’. It appears that the material was being made nearby but there is still the question of date and how it relates to any settlement.

How many ways are there to make money?
Peter Northover, Oxford University, Department of materials

Ideally any system of metal coinage needs to fulfil certain criteria. Some relate to the value and appearance of the metal such as defined and controlled composition; size and weight and surface finishes while others relate to the designs such as a repeatable design achieved through and to be of sufficient complexity to resist counterfeiting. The best way to achieve many of these features is through the use of dies and moulds.

The choice of metals for coins is related to factors such as scarcity and provides an interesting study in economic determinism. Compositional analysis shows changes in various coinage composition over time, most of which are essentially a debasement of the coinage with decreasing amounts of gold and silver used (e.g Iron Age gold coinage and Roman radiates). By plotting the compositions we can see how these alloys changed over time and see deliberate changes which often suggest a sophisticated understanding of alloys.

Blanks for die stamping can be made in a number of ways. Iron Age coin moulds seem to have been melting trays with circular impressions into which solid metals of appropriate amounts were weighed before the tray was heated (some have gold dust residues on the upper surface) to melt the contents which would then solidify as a circular blank. Molten metal was *not* poured into them as this would be extremely difficult to regulate. During later pieces more sophisticated casting practices were used such resulting in strips, trees or towers of coins radiating from a central sprue. Other coins blanks such as medieval silver coinage could be stamped from sheet as long as it was of relatively regular thickness.

The designs on coins can be achieved by die stamping or by casting in moulds. If blanks were to

be die stamped then they must have been polished *before* stamping not after to avoid eroding the image.

Casting metals in Roman and post-Roman Britain?
Justine Bayley

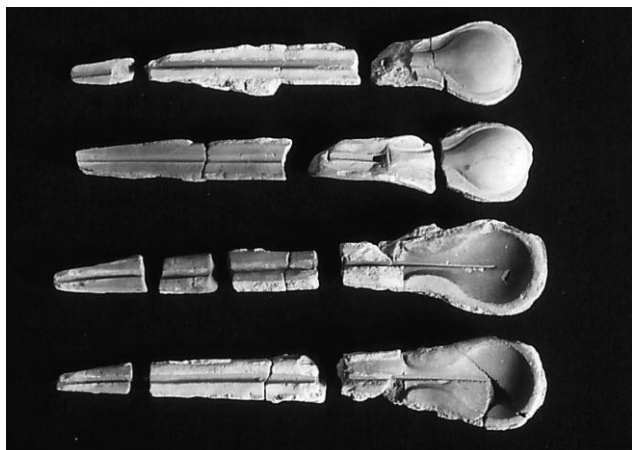
Moulds are an important piece of evidence for metalworking in the archaeological record, the technology of which develops over time. A key feature for identifying clay mould fragments is a dark euduced interior and an oxidised exterior but other materials were also used.

In the Iron Age casting primarily used open crucibles and the *cire perdue* or lost wax method in which clay was built up around a wax model of the desired object which was then dried and fired. The wax was melted and allowed to drain out the casting gate. This would lead a void which the bronze could be cast into. This is effective but labour intensive as a separate mould and pattern needs to be made for each object.

Roman casting technology was more sophisticated, utilising a broader range of crucibles including more jar like forms but more importantly different types of mould. Hollow castings were built up around ceramic cores using wax and metal chaplets and then covered in an outer layer of clay. The chaplets held the central core in place in relation to the outer layer of the mould and any extruding potion could be removed during finishing of the object. Larger objects such as life size statues were made by casting on and this can be identified by running metal on the interior of the object

Two piece moulds, known in bronze as well as clay, were useful for mass production as they could be based on lead or wood patterns however they are only suitable for certain shapes of objects as the two halves must be impressed and removed from the pattern. The shape of the object and the manner of its decoration will dictate the orientation of the two pieces of the mould e.g. the left and right sides of a trumpet brooch or the top and bottom of a headstud brooch.

There is evidence of casting multiple objects at once such as the nests of two-piece spoon moulds connected together and sharing a casting gate from Castleford, Yorkshire. This site has also produced evidence of complicated multipiece castings such as enamelled flasks.



In the post Roman period many of the same features continue such as the use of piece moulds and patterns. In the early medieval period reusable stone ingot moulds are common. Some are made of steatite from Scandinavia or Shetland and could be examples of travelling Viking craftsmen bringing tools from home. These ingots were probably often the basis for wrought products.

In the medieval and post-medieval period there were further developments. We still see clay moulds and multicasting of mass produced objects continues e.g. a mould for many medieval buckles found at the Guildhall Yard, London. However a range of other materials are also used such as limestone and antler which must have been designed for metals with a low melting point such as lead and tin alloys. Flash casting was used to make hollow objects such as ampullae in these materials. Molten metal would be poured in and out again instantly freezing only where it touched the surface of the mould. A very rare find indeed is a cuttlefish mould from London. Soft fish bone can be cut in half then clamped around an object to produce a piece mould only surviving in the archaeological record if they were never used.

The last major class of moulds discussed were large vessel or bell moulds. These moulds were made of clay in two steps with a release layer in between to stop them sticking. The casting took place in pits with cauldrons upside down and molten metal was run in from large furnaces rather than cast using crucibles to avoid chill lines between successive pours.

Ed note: It is hoped that a fuller article will be forthcoming in a later issue of Lucerna
Jenny Hall, Angela Wardle, Michael Marshall

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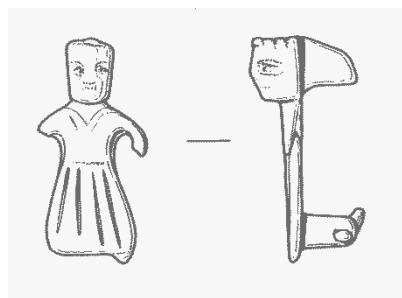
You might be aware that we recently re-launched our website, making it your first stop for news of Roman Finds Group, forthcoming RFG meetings and other specialist conferences, exhibitions, books or online links of interest, as well as details of committee members. Find us at www.romanfinds.org.uk.

For the first time, the site also now brings together all 41 of our back issues of *Lucerna*; a tremendous resource for the researcher and those interested in Roman finds. Issues 1-32 are available to download free of charge in the public section of the site.

Roman Finds Group members, however, can enjoy access to the most recent five years of *Lucerna*, as well as to our newly invigorated series of Datasheets, through our members' log-in area, the password of which we intend to change once a year or so, in order to keep it for RFG members only. Simply click onto the button in the bottom left-hand corner from any page in the site, and enter the following:
Username: rfgMembers
Password: r0m8nFG

We strive to maintain a balance between the website and *Lucerna*, and try to keep the site as up to date as possible. As always, any brief news items, suggestions or pictures (sadly lacking from the site until now) are gratefully received; please contact nicola.hembrey@english-heritage.org.uk. Thank you!

A follow up on the AHRC Collaborative Doctoral Awards, with an introduction to a study on Dress, Adornment and Identity in Late Iron Age and Roman Britain



In 2006 a brief note was issued in *Lucerna* highlighting the introduction of 'Collaborative Doctoral Awards' (CDA) - a new series of research PhD's funded by The Arts and Humanities Research Council (AHRC). These ventures bring together a University and a non-Higher Education Institution to give the award holder access to a wider range of supervision, training, and resources, as well as the opportunity to gain first-hand experience of work outside an academic environment. With over 300 CDA projects funded to date, these collaborative studentships represent a major resource and training opportunity for specialists across the Arts and Humanities sector.

A good percentage of the CDA's have been archaeological, with many in turn specialising in the study of particular artefact types – the more popular categories being coins, dress accessories and worked flint. In total six projects have examined Roman finds (Table 1), of which half have already been completed. With the exception of the latest study on Chariot fittings, all of these researches have been run in conjunction with The British Museum (BM).

Project	Award Holder	Status
Analysis of Roman rural land use in Britain comparing PAS and HER data	Tom Brindle	Completed
Poor man's silver? Pewter tableware: its function, significance and contribution to our understanding of life in Roman Britain	Lindsey Smith	Completed
Analysis of coin use and loss in Roman Britain based on PAS data	Philippa Walton	Completed
Dress, Adornment and Identity in Late Iron Age and Roman Britain	Michelle Statton	On-going
A New Study of the Penannular Brooch	Anna Booth	On-going
Free Reins and Guiding Hands: Iron Age and early Roman chariot fittings from western and central Britain	Anna Lewis	On-going

Table One: CDA Roman artefact studies

Although the BM have a large number of different on-going CDA's one of their primary objectives when engaging with the scheme has been to ensure that the information collected by the Portable Antiquities Scheme (PAS) is used to generate high

quality academic research. Indeed, all the Roman period projects, bar the one on Pewter, have utilised data generated by the PAS, and nor are they the only ones. Given both the data's potential and the fact that in order to finish a PhD within three to four years, as well as complete the training required protracted data collection is simply no longer feasible, a number of doctoral students are independently making good use of the PAS data too (Table 2).

Project	Award Holder	Status
Roman settlement in SW Wiltshire and the Montagne Sainte Victoire, France	David Roberts	On-going
Rural settlement in Shropshire during the LPRIA to Roman transition period	Mike Greene	On-going?
Rural settlement in Kent during the Roman period	Elizabeth Blanning	On-going
Fields of Britannia Project	Fiona Fleming	On-going
Roman Figurines	Emma Durham	Completed

Table Two: Other known studies using the PAS (data from the PAS website). For more information on both on-going and suggested future PAS research go to: <http://finds.org.uk/research>

The PAS may offer a wealth of data, but it also comes with a wealth of biases – so many in fact that a PhD and now post-doc are being dedicated to their study (see http://www.britishmuseum.org/research/research_projects/pas_and_understanding_the_past.aspx). Nonetheless, it should not be written off as useless 'dirty' data.

My own project is one of the aforementioned CDA's, done in partnership between the British Museum and University College London. It utilises the PAS data in an assessment of regional variation in dress and personal appearance in Late Iron Age and Roman Britain (50 BC-AD 410) through a broad-scale examination of the inter-regional patterning of brooches, hairpins, bracelets and finger-rings across central England between East Anglia and the Welsh Marches. Further potential intra-regional patterning is also being explored in five further case study counties - Suffolk, Hertfordshire, Gloucestershire, Warwickshire and Worcestershire; although the

PAS records are being supplemented by additional data derived from secure archaeological contexts in order for this more detailed analysis to be undertaken.

In terms of methodology I am using database and GIS applications to display spatial patterns - subdivided by period and object-type. In addition to assessing the dress accessories physical distribution over time and space, I am also examining their social distribution in an attempt to consider how different identities in Roman Britain (e.g. ethnicity, gender, age, status) were created from mixtures of native and imported traditions. This variation will be investigated and displayed using Correspondence Analysis (CA), a multivariate statistical technique which, in similar studies, has proved to be an effective method for addressing research questions of a contextual nature at varying scales.

I hope to be able to share some preliminary results imminently as I am currently just finishing my data collection, and revising my brooch classifications in light of my development of a concordance between Hull/Mackreth classifications. For me, this initial classification stage has been a difficult, but enjoyable, challenge. You see, unlike many of the other award holders who have a background in finds studies, my own is as a fieldwork archaeologist in the commercial sector.

I am not the only 'new blood' drawn in by the scheme; there are also one or two others, albeit working on finds from different periods that have likewise been 'turned'. This, I hope, can offer at least a little optimism in light of the concerns surrounding the training of future archaeological specialists. Indeed, with the CDA's in the academic sector, and schemes like the Future Curators and EPPIC and HLF/IfA bursaries in the commercial sector, work-placed training of specialists has been gaining momentum. Whether it continues to do so in the current economic climate remains to be seen.

Still it is worth noting that, whilst funding for the EPPIC and HLF schemes may now be at an end, the IfA is currently engaged in creating a workplace learning kit designed to encourage organisations to independently set up workplace training schemes. Likewise, the AHRC CDA's, which have until now been largely undertaken in partnership with the larger museums and organisations, are now engaging with a fuller range of organisations, in particular smaller businesses, regional museums,

regional arts organisations and community groups. If you would be interested in creating award further information can be found at:

<http://www.ahrc.ac.uk/FundingOpportunities/Pages/CollaborativeDoctoralAwards.aspx>

Michelle Statton

Publications

Brooches in Late Iron Age and Roman Britain, by Donald Mackreth. Vol. I. pp. xiv + 282. Vol II. pp. vi + 155. B&W plates 153. B&W figs 2. CD-ROM. Oxbow Books, Oxford. 2011. £70. ISBN 978-1-84217-411-1.

Don Mackreth's greatly anticipated 'Big Book of Brooches' has finally been published, albeit as *Brooches in Late Iron Age and Roman Britain*. It is the first Romano-British brooch typology to be published in full, which covers bow, plate and penannular types in their entirety. As such it is significant in offering an alternative to M.R. Hull's classification which, despite still awaiting publication, has become established as the basis of brooch studies - being referred to in numerous site reports and key brooch texts such as, Bayley & Butcher (2004), Hattatt (1982; 1985; 1987; 1989) and Crummy's Colchester finds report (1983).

The book comprises two volumes - one for text and the other for illustrations. The greater part of volume 1 - chapters 2 - 10 - examines the variety of brooches which are known to have been in circulation between 200 BC and AD 400. The major different family groupings are discussed in separate chapters - Late La Tène (ch 2), The Colchester Derivative (ch 3), The Headstud (ch 4), The Trumpet (ch 5), Continental Imports (ch 6), Plate (ch 7), Knee (ch 8), Crossbow (ch 9), and finally Pennanulars (ch 10). Each of these covers the brooch types further subdivision, which is denoted by a variable system of letters and/or numbers added to an abbreviated form of the group name (e.g. the Colchester Derivative Harlow type becomes CD Ha followed by 1.a, 1.b, etc), as well as information on their dating and distribution.

In all, Mackreth perceives over one thousand different brooch identifications, which cover not just

the main types and varieties, but also the hybrids, oddities, and fragments. Whilst the precise demarcation of these is not always made clear, Mackreth's detailed approach has nonetheless resulted in his recognition of individual workshop groups and regional distributions; both of which have been suggested for some time, but have previously been the subject of only limited systematic study. These identifications are important when considering the usage and wider social implications of brooches and it is these which Mackreth discusses in his final chapter (ch 11).

The second volume of the book contains the plates and figures referenced in the text. A total of 2093 brooches are illustrated and, as has been demonstrated by the separate reprinting of the visual catalogue from Hattatt's *Ancient Brooches and Other Artefacts* (1989), Mackreth's synthesis will be greatly appreciated by many. However, it must be noted that this catalogue has been created at the cost of any illustrations being included in the main volume.

The CD-ROM which accompanies the book contains PDF, CSV and MS Access versions of the study's massive database. It includes the brooches serial numbers, location, and details of publication. Unfortunately the Access edition of the database appears to be of limited functionality, but the CSV file can be transferred into an Excel spreadsheet or an Access database.

Mackreth's *Brooches in Late Iron Age and Roman Britain* is undoubtedly of relevance to anyone with an interest in Roman small finds. However, given its intricacy and cost (£70) it will definitely find greater currency amongst specialists than the more general finds enthusiast.

Michelle Statton

Please note that the full book review, from which this report was extracted, may be found in *Papers from the Institute of Archaeology*, Vol. 21 (2011) and will shortly be available online at <http://pia-journal.co.uk/index>.

Bibliography

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Crummy, N. 1983. *Colchester Archaeological Report 2: The Roman Small Finds from Excavations in Colchester 1971-79* (Essex).

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Hattatt, R. 2000. *A Visual Catalogue of Richard Hattatt's Ancient Brooches* (Oxford).

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The Archaeology of York 6/2: Archaeology in the Environs of Roman York by Dr Patrick Ottaway.

This volume reports in detail on the Roman phases from some 50 excavations and watching briefs undertaken in York between 1976 and 2005. Some are major excavations such as 16-20 Coppergate and 14-20 Blossom Street, while others are very small sites which would not normally merit a publication in their own right. This volume brings together all the excavations in the extra-mural area of Roman York and thus contributes to the overview of history and topography of the city. Contact Christine Kyriacou at York Archaeological Trust 47 Aldwark, York YO1 7BX to purchase.

Dépôts votifs d'armes et d'équipements militaires dans le sanctuaire gaulois - et gallo-romain des Flaviers à Mouzon (Ardennes), by O. Caumont. 2011. ISBN: 978 2 35518 023 1. 70 € + 7 € postage and packaging.

Situated on the border between the Remi and the Treveri, the shrine of the Flaviers at Mouzon (Ardennes) has given about a thousand of weapons and military fittings, consisting of shields, chain mail and cuirasses, swords, daggers, throwing weapons, harness fittings, axes and knives. The deposits, which can be dated between the beginning of the Augustan period and the mid-1st c. AD, belong to the latest within the sanctuaries of Gaul. They mostly illustrate the concept of substitution offering, here achieved by the deposition of incomplete weapons, fragments, and, above all,

images of weapons through a process of symbolic reductions. Part of these depositions are probably linked to a pars pro toto ritual. Some artefacts are subject to several treatments, showing both reduction and destruction. This study describes all the finds through a catalogue associated with typological and technical studies, as well as comparisons.

By its frequentation, deposits and rituals, the Flaviers shrine lies in the middle between two different religious traditions. The specific nature of these votive offerings is replaced within the cultural and historical context of this transitional phase between the Gallic and Roman worlds. The identity of the users is analysed though the nature and origin of the offered weapons : Gauls or Romans? civilian or soldiers? infantry or cavalrymen? legionaries or auxiliaries...?

RFG DATASHEETS

We have got off to a slow start with the production of datasheets so this is 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 present ongoing research – 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 willing to write a datasheet.

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Conferences

RAC/TRAC 2012

29th March to 1st April

Frankfurt am Main, Germany

RAC 2012 will be hosted by the Römisch-Germanische Kommission des Deutschen Archäologischen Instituts.

Further details can be found at

<http://www.rac2012.org>

Or by contacting: David Wigg-Wolf, Römisch-Germanische Kommission, Palmengartenstrasse 10-12, 60325 Frankfurt am Main, Germany
info@rac2012.org

Rags and Riches: dress and dress accessories in social context

21st April 2012

University of Reading

This conference aims to bring together archaeologists, anthropologists, historians and others from related disciplines to discuss current issues of methodology, theory and interpretation of dress and dress accessories, from prehistory to the present day.

Details about the call for papers can be found at <http://www.reading.ac.uk/archaeology/Events/arch-rags-and-riches-conference.aspx>. We are requesting 300 word abstracts for 20 minute papers on themes relating to the social context of dress from all periods and regions, which should be sent to ragsandrichesconference@gmail.com. The deadline for submissions is the 17th February 2012.

Announcements will be posted at the web address above, but we can also found on facebook (<https://www.facebook.com/events/212400145506326/>) and twitter (@riches_and_rags).

The development of industry in southern Roman Britain

12th May 2012

Chertsey Hall, Chertsey, Surrey

Major biennial conference held by the Roman Studies Group of Surrey Archaeology Society. Themes will be the development of the Wealden Iron Industry, metal working, glass making, the leather, pottery and tile industries. Speakers will include Justine Bayley, Ian Betts, Jeremy Hodgkinson, Jackie Keilly and Margaret Broomfield, Louise Rayner and John Shepherd.

Full details, booking arrangements and travel directions will be available under "Events" on the Society's website. For more information contact Edward Walker, email cande.walker@talktalk.net, web www.surreyarchaeology.org.uk/events/all/list. The cost is £15