CONTEXTUALISING METAL-DETECTED DISCOVERIES: THE STAFFORDSHIRE ANGLO-SAXON HOARD

NEWSLETTER 2

AUGUST 16TH 2012

Introduction
As we are coming to the end of the first stage of the X-radiography in Lincoln, this is an appropriate point to send you the second of the Staffordshire Hoard Analysis Project Newsletters. In it you will find information about what is going on in the different strands, the exhibitions with hoard material that are now in place, and the conferences where papers are being delivered.

On a more general note the wider world has now been informed of the Project's existence. The Owners issued a statement to this effect in July, and I wrote a brief note for Chris Catling to circulate in SALON at the beginning of August. So all FSA and IFA members have had the opportunity to read about it. The Newsletters will also be placed on Barbican's website so that anyone with an interest can follow what we are doing. I am also in the process of writing some up-dated copy about the project for the Hoard website.

Conservation and Metal Analysis at the British Museum
I am happy to inform you that Stoke-on-Trent City Council and the British Museum (via their commercial arm) came to an agreement over the contract towards the end of June, and so this final strand of the project is now firmly in place. This has allowed the recruitment of the hoard conservator and metal scientist posts there. The foils and the initial group of material for the pilot project on surface enrichment on which they will work, went to the department on June 20th.

One of our new colleagues, Duygu Camurcuoglu, has been in post since mid July and will be working until December next year. She has been working in the BM as both a ceramics and a metal conservator. Amongst the projects she has been involved with, there are several of direct relevance to her work for the project. She brings a knowledge of Anglo-Saxon material through her work on the Ringlemere and Sutton Hoo 2000 projects, and has also worked on the Roman helmet from Hallaton. Currently she is on the steep learning curve of assimilating all the background to this project.

The metal scientist is Eleanor Blakelock and she will take up a one year post on September 24th. She too is a period specialist having completed a PhD from Bradford University on early medieval blades. She has experience of working with non-ferrous material, and with all the techniques we hope to apply including X-radiography. This will not be her first involvement with English Heritage projects as she has had a work placement with the Ancient Monument Lab at Fort Cumberland.

Pilot work on X-radiography of Hoard items has been ongoing at the BM and a meeting is planned with the Lincoln team on September 28th after Eleanor has taken up her post. This will allow the teams to compare results and fine tune methodology if necessary.

Following various meetings it has been agreed that two sets of gold standards will be purchased for the project. Three different compositions of the type likely to be found amongst the gold were specified by our colleagues at the BM. There are no 'off the shelf' standards that fit these and so they are having to be made specially. They should be ready by October. We need these standards as they will be used to calibrate all the analyses no matter what the technique or where the analyses are being carried out. This ensures comparability of results. The BM is buying a third set for use on the other gold analytical work they have to do including other Treasure finds. This will be a lasting research dividend from the Analysis Project as should another comparable Treasure find come along, the results of the analyses we do can be easily compared to it.

The BM teams themselves tell you what precisely they have been doing below.

The conservation team

New BM team member Duygu Camurcuoglu started her English Heritage funded Staffordshire Hoard contract on 13 July 2012 and work on the pressed foils project began. As the first part of the work, the conservation team audited and condition-checked all of the material which had recently been delivered to the BM, consisting of five boxes of silver and silver-gilt foils and fluted strips, (for the conservation and reconstruction project) and a box of gold items for science-led analysis. The condition check was carried out by comparing objects against available photographs supplied with conservation documentation from BMAG. Following this, a more detailed audit was undertaken to record all of the Staffordshire Hoard material currently at the BM.

Planning meetings for the conservation project have taken place and related background information on the hoard, as well as the contextual data (e.g. the excavation reports, grid plans, x-rays, photographs) is being collated for the study and reconstruction of the foils and linking them to their archaeological context. The first of the twelve known stylistic groups of silver-gilt panels, depicting the fallen warrior, has been progressed. An initial comparison has been made with other known examples of this scene.

Meanwhile, the team continues to work on the completion of the National Geographic-funded material. The work has involved soil removal on soil-compacted gold sword pommels and fittings and removal of corrosion on the silver objects. Gilding and niello have been revealed, as have macroscopic and microscopic traces of organic materials. Following this work these pieces were passed to the BM specialist scientists for SEM imaging, further investigation and associated sample removal for analysis.

Marilyn Hockey, Fleur Shearman, Duygu Camurcuoglu

The science team

Over 100 applications for the Hoard scientist post were received and after the interview process Dr Eleanor Blakelock has been appointed, starting at the BM on 24th September (see above). To begin with she will be doing the XRF analysis of the gold and silver items here at the BM. Research into gold alloy standards appropriate for the Hoard XRF analysis has been carried out, and these will be custom made for the project. In the meantime, Duncan Hook has been to BMAG with 'standards' from the BM to spend a day analysing them with the BMAG Mistral and portable XRFs. X-ray diffraction analysis (XRD) of niello from silver fittings is being carried out in collaboration with Cym at BMAG.

Study and measurement of beaded wire on the gold sword fittings which came to the BM for the National Geographic-funded strand is being carried out in the Scanning electron microscope. For this process it has been very helpful that Niamh Whitfield kindly came to the lab to discuss the filigree with us.

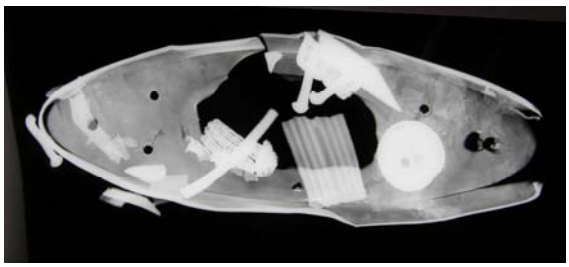
Susan La Niece, Aude Mongiatti

X-radiography at Lincoln

Michelle and Rob at Lincoln have completed the first batch of X-radiography. The pieces needed for the PMAG exhibition (see below) were completed first and returned to Stoke in late June. The remainder returns to PMAG next week.

I went to see the results last week and they are better than even I had hoped for. X-radiography is always a useful tool to see what is hidden by dirt or corrosion and these plates naturally do that. I have mounted a couple of examples below to illustrate. Please note that the images from the X-radiographs were just taken rapidly by me using a small camera and an ordinary light box. They do not do justice to the quality of the images on the plates. When they have been properly digitised, their full quality will be evident.

The first example (K295) shows a hilt plate still thickly encrusted with dirt and its image on the X-radiograph. Not only can all the additional fragments inside the mud be seen, but the all the details of the hilt guard too. Similarly in the gold pommels additional fragments and rivets can be seen in the soil inside where it remains *in situ*.



K295 Scale 1:1

The second example shows K398. Again it needs to be stressed that my photo of the X-radiograph doesn't do the sharpness of detail visible on the plate justice, but you can see how much detail is revealed. If we do not have the resources to clean all the items by the end of the project, images such as these will enable us to know what the decoration is.

K398 Scale 1:1

An unexpected by-product of the X-radiography has been to reveal that some of the silver is heavily leaded. Lead is opaque to X-rays and so the images of these pieces appear slightly blurred or in the case of the silver pommels, just as opaque white shapes. Chris Fern has made the interesting suggestion that the pommels may have needed to be leaded because silver on its own may not have been

heavy enough to balance the sword. This could be explored by conducting a detailed survey of the weights of the gold and the silver pommels. This was not a line of research scoped in the project design, but it is an excellent example of how new insights and avenues of exploration open out when material is properly assessed.

I am currently considering what we have learnt from this first batch of work and that will be used to help decide what the next batch will consist of.

Conservation at BMAG

Conservation of items is ongoing at BMAG and Cym has completed her preliminary characterisation study of the items with niello, and is continuing to work with the BM materials team as noted above. She circulated the report of her work in July but if any team member doesn't have a copy and would like one, please let me know.

In this she grouped fragments that may come from the same object and started to characterise the different styles of how the inlay was applied. The niello inlay on the strip with the biblical inscription (K550), for example, can be characterised as consisting of raised, uneven and slightly domed strips and so far this has been found on only one other piece. More commonly the niello consists of neat flat lines roughly flush with the edges of the channel into which it is inlayed and the surface of the object.

The unconserved state of some of the niello-decorated items means that the decoration is obscured by soil. This has prevented her assigning pieces to groups in some instances. We will try X-radiography to see if that helps but the majority of the neillo-decorated pieces are silver. If they too are made from heavily-leaded silver, then X-radiography will probably not solve the problem and investigative conservation will be the only option.

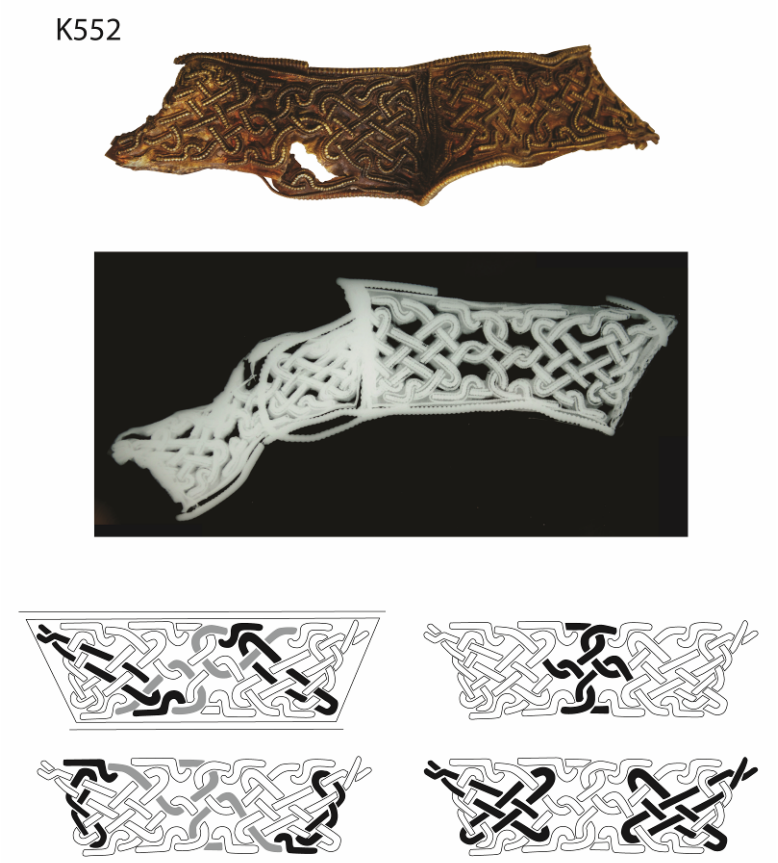
Typology at PMAG

This is a slight misnomer at the research team did not want to distract the museum staff in the run-up to the opening of the big exhibition (see below). Chris has therefore been working in Lincoln on the material there. He has started to produce the specifications for investigative conservation and is making steady progress. Below he tells us about his object of the month.

Object of the Month

The photograph and X-radiograph of K552, on the next page, illustrate the sort of damage typical of many of the hoard items: the gold sword hilt-collar has been torn open, to remove it from the grip, damaging its intricate filigree decoration. The X-radiograph in particular shows the sophistication of its decoration, which is very similar to that seen on sword-hilt fittings found in 2002 at Market Rasen, Lincolnshire; but a form of ornament until recently most associated with the Style II animal art of the Kingdom of Kent, of the early 7th century. In this case, the pattern, which is the same on both sides, comprises eight abstract zoomorphs (black: heads and jaws; grey: bodies), whose looped jaws link together to make two crosses, whilst their serpent-like bodies form a central quatrefoil knot. This combination of animal and geometric motifs aptly demonstrates the level of sophistication and miniature artistry, riddling ambiguity even, that was the hallmark of the early-medieval goldsmith. Despite this, no reverence was shown for the animal art of the hoard — or to any possible deeper meaning such motifs might have held, nor indeed for the overtly Christian objects — by the individual, or individuals, who amassed the collection from the proceeds of arms.

Chris Fern



Scale 1:1 (Chris Fern)

The initial plans for illustrating items of the hoard included photographs, the sort of line drawing Chris has produced to explain the different parts of the animal interlace here, and drawn sections where appropriate. Both Chris and I have been very impressed with the potential the X-radiograph images have for clearly showing patterns in the decoration. Being monochrome, the details stand out more clearly than in the photograph. We have therefore decided that the final illustrations will include X-radiograph images mounted alongside the photographs.

Guy meanwhile has been continuing to photograph material at PMAG. He has put together a rather nice slide show of some of the images. If anyone would like a copy, please contact me. It is a 10Mb zip file.

Exhibitions

An exhibition containing the largest number of Hoard items yet seen together opened in PMAG on July 21st and will run until September next year. The short period of time Chris had to work with the objects at PMAG before it opened has paid dividends. Some of the groupings on display relate directly to observations he made during that time such as the linkage between the elliptical fitting and the cloissoné strip shown in the last Newsletter (p. 4). Good use of small wall-mounted tablet computers has been made. These allow visitors to scroll through objects and examine details. I will build in sufficient time in the agenda of the October core team project meeting so that we can all spend some time looking at it.

As well as this exhibition, the BMAG exhibition continues as normal. A small selection of objects is on display in Lichfield Cathedral and another small exhibition is due to open shortly in Tamworth. Both Lichfield and Tamworth are part of the Mercian Trail Partnership.

Conferences

In early September Chris will be giving a paper about his work so far at the 63rd Sachsensymposium that is being held in Durham this year. The abstract is given below. Details of the organisation generally and the conference can be found at this website.
http://www.sachsensymposion.org/

Treasure of Kingdoms? Some preliminary observations on the material culture of the Staffordshire Hoard.

> In the summer of 2012, the first of a planned two-stage study of the Staffordshire Hoard started, funded by English Heritage. An unparalleled find for early-medieval England, from the heart of the Mercian kingdom, it challenges many of our preconceptions and presents, above all, a dazzling and unprecedented image of 7th-century elite warrior culture — with many finds, such as the sword and helmet fittings, personal, 'princely' effects. The discovery has already attracted much comment. The purpose of this paper is to make some further preliminary observations, ahead of the study proper.
>
> Although a Mercian 'treasure', as a *corpus* the metalwork demonstrates an array of styles and technologies, covering a considerable chronological range. The finds and especially the Style II animal-art and cloisonné workshop traditions represented have relatively few parallels from within the large Mercian kingdom. Rather, they evoke particularly the traditions, technologies and iconography of the influential, contemporary kingdoms of East Anglia and Kent, with many objects calling immediately to mind the regalia of Sutton Hoo, Suffolk. This raises the question of how diverse the origins of the collection might be, and whether certain 'kingdom styles' might be represented, with connotations for relations between 7th-century polities and even individuals, of a hostile nature or otherwise.

Earlier this summer Morn Capper (BMAG) convened a round table session chaired by Alan Thacker on the interpretation and display of the Hoard at the International Medieval Congress at Leeds in July. The abstract for the session can be seen by searching for session 1403 at http://www.leeds.ac.uk/ims/imc/imc2012.html . Leslie Webster spoke at that and was able to tell the people present about the research project.

Between these conferences and the SALON note, I think the wider professional world will have been informed about what is going on with regard to the Analysis Project, and where to come to for information. As this was reported as a concern during the development of the project, I hope this will be thought to be helpful.

Looking forward, Cym hopes to present the work she has been doing on the niello-decorated items at the International Conference on Metal Conservation to be held in Edinburgh next year.

The Next Newsletter

The core team for the first stage of the project is due to have a meeting at PMAG in October. It would seem sensible to delay the next Newsletter until after that when a report can be provided in it for the wider team. So I would hope to circulate the next Newsletter by the end of October. Can I remind you that contributions are always welcome.

H.E.M.C.
16:08:2012