

HMS NEWS

Historical Metallurgy Society
77 Spring 2011

Your Society needs your help!

We start Issue 77 of the HMS News with a request to all our membership to help with future of the society. The society has a continually developing membership with many members overseas and comprising a varied mix of professionals associated with the metal industries, heritage professionals, academics and students. It is important for the society to understand the types of individuals which comprise the membership and to include their interests in the future plans of the society.

It is then for these reasons that you will find a questionnaire enclosed with this issue of the Newsletter. As we approach the 50th anniversary year, the Membership, Publicity and Programme (MPP) Committee is trying to improve and update the way HMS communicates with its members and provides events and activities. It is clear that many of the activities run by the society are popular with many members but MPP is keen to both diversify and increase the membership. This is not to suggest that the society is simply trying to grow, it is also equally concerned with increasing active membership!! As echoed in previous Newsletter columns the health of the society is dependant on the activities of the individual members and it is fair to say that all committee and council members would welcome input from any member about their views on the society. The questionnaire is one way that these views are being sought but the HMS NEWS remains a great vehicle for airing thoughts among the membership.

We would then really appreciate your efforts in responding to the questionnaire. If you could find five or ten minutes to fill in the questionnaire members of MPP and other committees are eager to discover the views of the membership.

The responses will directly inform how the Society develops in the years ahead, and the more responses we get, the more accurate we know the results will be. Most of the survey involves ticking boxes, and in places we have left some room for you to add your own comments. Most of the questions may have more than one 'answer', so please tick as many boxes as you think apply for you. We would ask that you return the forms to Ellie Blakelock, the MPP Committee chair, by 14th May (the same date as the deadline for nominations to the AGM), so that we can begin to think about the changes we need to make at the Helmsley meeting in June.

I hope to see many of you at the June AGM and meeting, and will be happy to talk more about some of the developments for the future.

*Paul Belford
MPP Committee*

Tales of NARNIA!



A consortium of European Universities has recently been awarded EU funding to provide young researchers with the skills and resources necessary to conduct research on a range of archaeological materials. The NARNIA project (New Archaeological Research Network for Integrating Approaches to ancient material studies) is led by HMS member

Dr Lina Kassianidou of the University of Cyprus.

The project intends to foster the exchange of ideas and methodologies amongst existing research groups and will create a reflective environment to facilitate the reassessment of current approaches to material studies.

A significant part of the project will look at the archaeology of metals and metallurgy with European scholars collaborating to provide a series of training and research opportunities. With the project being based in Cyprus, the Archaeometallurgy of the island will figure high on the agenda. One of the strengths of the project design is that cutting edge laboratory analyses will be integrated with archaeological field methods and emerging field techniques.

The range of scholars and professional practitioners is impressive as is the range of complementary skills. The team will be focusing on some important archaeological sites and developing approaches that not only link together field approaches such as prospection and excavation with detailed post-excavation analytical studies but also seeking to explore the interfaces that exist between disciplinary boundaries. As such, the project aims to straddle material categories and to think across disciplinary boundaries so as to produce archaeological syntheses that look at the relations between different crafts.

NARNIA will bring together universities and research institutes from five European countries, namely Belgium, Cyprus, France, Greece and the United Kingdom, and a Mediterranean partner country, Jordan. Research groups will focus on metals, glass, ceramics, built heritage, the Archaeometallurgy of Cyprus and the use of pXRF in archaeology. In total, Sixteen Early Stage Researchers (equivalent to PhD candidates) and three Experienced Researchers (post Docs) will be trained to integrate theory and archaeological sciences for the study of different material categories, including ceramics, metals, glass and mosaics.

More information can be found at <http://narnia-itn.eu/>

Roger Doonan

The next edition of the HMS Newsletter will be published in July 2011. Contributions are welcome and should be emailed to r.doonan@sheffield.ac.uk by 1st July 2011.

The Metal Workshop at Tell Tayinat, Turkey

During the 2006 and 2007 field seasons, the Tayinat Archaeological Project (TAP) partially excavated the remains of an Early Iron Age metal workshop located at Tell Tayinat, Turkey. The workshop can be divided into three rooms (Figure 1). The southern Room 1 consisted of a semi-circular installation with a mudbrick platform built on top of a layer of sherds, bones, and stones. The installation measured 2.3 x 1.2m. A layer of ash surrounded the installation to the north and east, as well as covering the installation and sealing against the wall to the west. In the northern Room 2, five ash deposits, each about 50cm in diameter, formed an “L-shaped” pattern in the southwest corner of the room. The deposits were spaced approximately 75cm from the center of each deposit and in the northeast corner was a trail of ash. In Room 3, several slag cakes were found deposited in a semi-circle, in the southwest corner of this room. Significant amounts of slag, copper and iron fragments, tuyère and crucible fragments were recovered from each of the rooms. The workshop is dated to the Iron IA period (12th century BC), based on the associated pottery. The most diagnostic characteristics of the pottery are the presence of Mycenaean IIIC1-style painted ware and a late version of Hittite Drab Ware. The associated material culture thus dates the workshop securely to the Early Iron Age, or more specifically the Iron IA period.

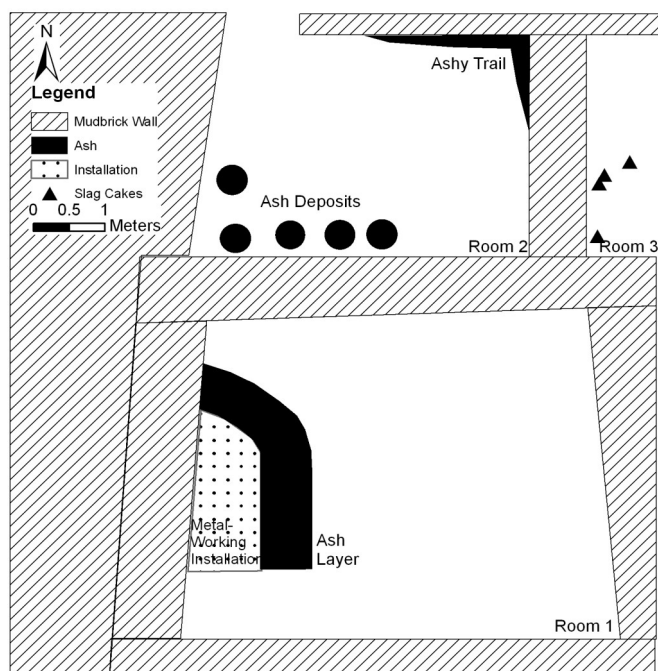


Figure 1: The Tell Tayinat metal workshop.

The presence of hammer-scale and plano-convex slag cakes are strong evidence for iron-smithing, but X-Ray Fluorescence (XRF) analysis of slag and metal samples indicate cuprous metal-working activities, including copper melting, copper alloying and tin smelting occurred in the same contexts. Though preliminary, these results infer that both iron and copper production occurred together and suggest that the workshop reflects a transitional phase, when iron-working and copper-working were not part of separate, specialized production processes. However, more work is needed to confirm these hypotheses.

Therefore, there were three goals related to the metal workshop for the 2010 TAP field season: 1) Excavate the remainder of the structure, 2) Analyze the materials excavated during the 2006 and 2007 field seasons that are stored in Turkey, and 3) Create a reference collection of metalworking material found at the site. Excavations in 2010 revealed that the eastern portion of the northeast room had been destroyed by later Iron Age building activity. The remainder of this room was excavated, revealing more metalworking debris, including iron, copper and slag samples. These were collected and the room mapped.

Second, more analysis was carried out on the material collected during the 2006 and 2007 seasons. This included collecting metric data on tuyère and crucible fragments, as well as slag. The tuyères can generally be divided into two types: round and square. However, these types were similar in fabric and size. Fragments of eighteen round and nineteen square tuyères were recovered, along with twenty-one that could not be classified. The bore holes were generally 1cm or smaller. Outer diameters of the tuyères ranged from 3 to 8cm. Crucibles were identified as such based on the presence of a complete lip of the rim with slag adhering to the inside. In most instances, too little of the vessel was preserved to obtain an accurate measurement of the diameter. However, it was possible to estimate the rim diameter of two crucibles to be about 9-10cm and one to be about 15cm (out of at least 31 crucibles). This is in contrast to two other crucibles found at the site with estimated diameters of 17-19cm.

Iron and copper objects were studied more thoroughly for a proper classification of artifact types. Of the identifiable artifacts, those of iron included weaponry and armor (projectile points and armor scale), tools (a chisel, a needle and a nail) and even a piece of jewelry (a pendant). Similarly, there were also copper artifacts in all three of these categories: weaponry and armor (a projectile point and armor scales), tools (reamers), and jewelry (pins, a ring and a fibula).

Finally, work began on creating a reference collection. In order to assist excavators working on the project, many of whom have limited knowledge about archaeometallurgy, in the proper identification and recording of metallurgical material, a reference collection is necessary. A collection of the range of materials was started, including the various types of slag and metal samples, and a guide was started to help differentiate ceramics used in metallurgy from other types. More work is needed on this collection.

Unexpectedly, additional Early Iron Age metalworking material was excavated from another area of the site, including hematite and fragments of a socketed crucible with copper slag. Also from this area was black, glassy slag which XRF analysis identified as coming from the mineral rutile based on having an unusually high amount of titanium oxide and other associated elements. The presence of this material suggests that during the Early Iron Age metalworking at Tell Tayinat was carried out at multiple scales of production.

I would like to thank the Historical Metallurgy Society for awarding me a grant from the R.F. Tylecote Memorial Fund to assist in travel to undertake this work.

Jim Roames

Clay mould pieces from Bourton-on-the-Water, Gloucestershire

During the autumn of 2010 Gloucestershire County Council Archaeology Service undertook the excavation of a multi-period site to the north of Bourton-on-the-Water.



Figure 1: Location of Bourton-on-the-Water

The excavation covered an area of 1.6ha and features dating to the Neolithic, Bronze Age, Iron Age and Anglo-Saxon periods were identified. During the excavation of one of the prehistoric pits pieces of clay mould were recovered. At this stage it is unclear how many moulds were deposited in the pit as many of the pieces had fragmented in the ground although the surfaces are crisp and show little sign of erosion. One of the larger pieces appears to be from the hilt of

Bronze Age leaf-shaped sword (Figure 2).



2cm

Figure 2: The mould fragment showing detail of hilt.

The pit also yielded prehistoric pottery and animal bone and was located near the entrance of a possible palisaded enclosure which may date to the Bronze Age. There was no evidence of *in-situ* metal working on the site but interestingly a ‘hoard’ of seven Bronze Age socketed axes was found nearby in 1907, including one which had a hole in the surface caused by an imperfect casting. Post-excavation work is now starting and it is hoped that more detailed information can be provided to the society once this has been completed.

Andrew Walsh
GCC Archaeology Service,
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Bronze Age metallurgy in the Southern Urals

A collaboration between the universities of Pittsburgh, Sheffield and Chelyabinsk State has received further support from the Arts and Humanities Research Council and The National Science Foundation (US) to continue research in the Southern Russian steppe.

A number of fortified settlements within the region dating to the Middle Bronze Age have produced evidence for primary copper production. Current research aims to better understand the processes employed and how these practices were organised. Some scholars have argued that the Middle Bronze Age Sintashta sites were major copper producers with extensive networks in place for ore procurement and distribution of smelted metal.



Figure 1: Trench mines in the proximity of settlement sites

The project has so far been successful in locating copper deposits in the immediate vicinity of several settlement sites and has found tantalising evidence, trench mines in association with prehistoric ceramics, for early mining. Whilst the presence of slag on settlement sites attests to the practice of primary copper smelting it remains unclear how these activities were organised. It has been argued that copper smelting was an intensive activity which occurred in most domestic dwellings. However, preliminary geochemical prospection suggests that the ubiquity of copper smelting might have been over-estimated suggesting a need to scale down the estimates for copper production.

Over the next three years the project will seek to better characterise the evidence for early mining in the area and extend its studies of settlement to neighbouring sites. The role of pXRF has been indis-

pensable to the project making possible high resolution survey over an extensive area. The results are available immediately with minimal post-acquisition processing meaning that archaeological intervention can make use of geochemical data instantaneously rather than having to wait months for laboratory results.

Roger Doonan

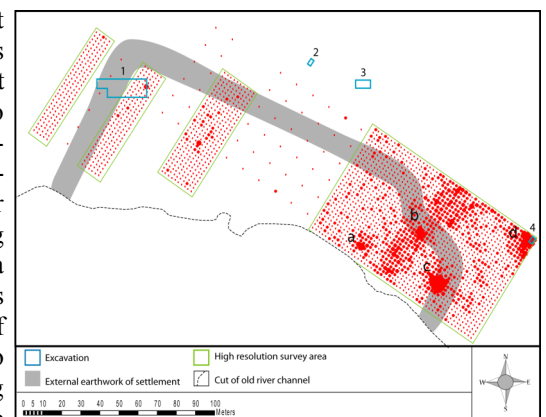


Figure 2: Distribution of Cu across MBA settlement site as determined by *in-situ* pXRF

HMS Members Solve Mystery?

In the last issue HMS NEWS (issue 76) member Alan Williams called on other HMS members to help with an intriguing problem. He was keen to establish the provenance and detail of a painting which is claimed to be the oldest painting of a blast-furnace and finery in Europe. The original image which had caught Alan's attention was published in a book by Marechal, J.R. ["Considerations sur la metallurgie prehistorique" (Lammersdorf, 1963). It was written in French, but published in Germany, unfortunately, the picture is reproduced without any accreditation (see Figure One). It was thought to be the work of Patenier (sometimes spelt Patinir) but it does not appear in the standard textbooks about him.



Figure 1: The image reproduced from Marechal's volume.

The response from HMS members has been exceptional with an unprecedented amount of interest shown in the image with responses coming from all over Europe. Alan felt that many of the original respondents, whilst adding detail about the imagery, only really restated the question and as such did not move the mystery on.

He was most encouraged by the comments of Vincent Serneels who said that "The painting is said to be the private property of Mme Ilse Vögler von Martin at Hattingen in the Ruhr area." Serneels points out that recently, a colour picture of the same work of art has been published on the front page of the journal "Der Märker" Landeskundliche Zeitschrift für den Bereich der ehem. Grafschaft Mark und den Märkischen Kreis, 41. Jahrgang, 1992, Mai-Juni Heft 3. and it is attributed to Joachim Patenier and said to be in Privatbesitz" with no name."

Katja Boespflug also supports the suggestion made by Vincent Serneels. Katja found a reproduction of a part of the picture in a book she was re-cataloguing with the title "Les artistes et les usines a fer" by René Évrard, published in 1955. The picture is found in the chapter on Joachim Patenier and gives the (then) owner, a Ms Ilse Vögler von Martin from Hattingen (Germany). The reproduction of the painting is a photo which was taken during the exhibition "Kunstaustellung Eisen und Stahl" in Düsseldorf. Katja includes a scan of the cover page and the presentation of the cropped image from the book (see below)

RENE ÉVRARD
SECRETARIE DE DIRECTION
A LA
COMPAGNIE GÉNÉRALE DES CONDUITES D'EAU (S. A. LIÈGE)

LES ARTISTES et LES USINES A FER

Œuvres d'art inspirées par les usines à fer



ÉDITIONS SOLELDI
RUE DE LA PROVINCE, 37
LIÈGE
—
1955

Figure 2: Internal detail from volume containing reference to Patenier 1955

Edmond Truffaut wrote originally in December suggesting that Patenier who was born in Dinant (Belgium), often represents in his works the picturesque shores of the Meuse river. He suggested that in the painting of Quentin Metsys "Saint François recevant les stigmates" (Madrid. Prado Museum), the landscape, by Patenier represents Dinant. Edmond supplied a number of images illustrating this point and it does indeed seem that there are similarities (See Figures 4, 5 and 6).

Following up on his original email Edmond Truffaut wrote again in March informing the editor that he had found a drawing taken from the original picture and assigning it to Patenier in the 14th Cent. Intriguingly he suggests it includes a fragment that is not in the original image reproduced by Marechal and therefore suggests that the original had been cut up for aspects of its landscape and its technical content. It will be interesting to see how this aspect of the investigation develops.

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LES ARTISTES ET LES USINES A FER

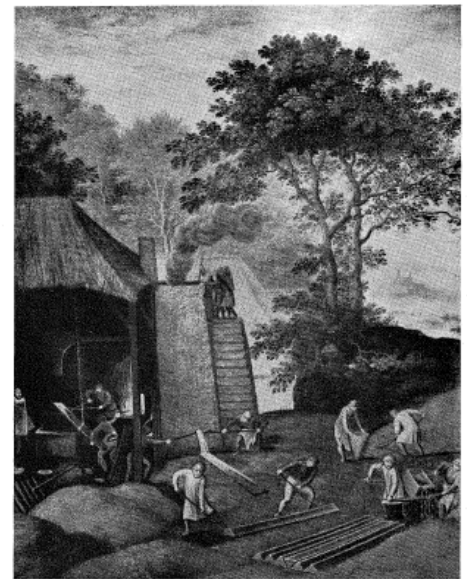


Fig. 14. — Joachim Patenier. — Paysage avec haut fourneau et mine.
(Propriété de Mme Ilse Vögler von Martin, à Hattingen/Ruhr.)
(Photo du « Kunstausstellung Eisen und Stahl », Düsseldorf.)

Figure 3: reproduction of Patenier's (?) work in Evrad volume.

Paul Vigor offered perhaps the most original account of the painting which he accepts is most likely to be controversial although he does seem to argue his point with some enthusiasm. Paul begins by highlighting the issue that "most orthodox archaeologists do not, by tradition and/or inclination, trust artists as reliable witnesses and recorders of the past... Consequently, artworks featuring early industrial subjects and locations may be considered the least understood, least studied, most distrusted class of contemporary archaeological evidence



Figure 4: Image supplied by Edmond Truffaut showing banks of Meuse river. Dinant 1646 - Selon Merian. Ed. J. Loewenthal, Frankfurt a. M.



Figure 5. Image supplied by Edmond Truffaut showing Dinant. Dinant - Pont, Citadelle et Eglise Ed. Nels / Ern. Thill, Bruxelles



Figure 6. Image supplied by Edmond Truffaut showing detail from Quentin Metsys. Prado Museum. « Saint François recevant les stigmates ». Note Dinant in background.

we possess!”

Paul suggests that it was not unknown for European artists to visit Britain and paint British scenes - including industrial subjects. The classic example of such a foreign work must be Elias Martin’s unique sketch of the construction of the Iron Bridge (held in Stockholm by the Skandia Company Museum). Whilst agreeing with Alan Williams that the picture may well have been painted by a Flemish artist c.1500, it is not automatically follow that what is being depicted is continental as the artist **may** have been working in England!

In considering likely candidates for a picturesque location with a gorge and large, navigable river with a prominent rocky crag accompanied by timber-framed, thatched, watermill equipped with a large, over-shot wheel Paul is drawn towards suggesting Shropshire.

In developing his argument he draws attention to the singular, craggy rock; the large navigable river; and the watermill, and is inclined to suggest the subject is more specifically sited between Buildwas and Marnwood Hall, on the northern bank of the River Severn. He argues that the topography suggests the Ironbridge Gorge as viewed from the west - from the vicinity of Buildwas village. The navigable river might be the Severn; the artist appears stood on the northern bank, looking east (downstream). The prominent, craggy rock bears an uncanny resemblance to early, tree-less artistic depictions of Benthall Edge (when viewed/imagined from the west) - (Smith 1979: 17, 21).

The monks of Buildwas Abbey are known to have operated a number of watermills in the vicinity; and worked a bloomery furnace producing wrought iron. My proposed Buildwas-Marnwood location lies just across the Severn from Buildwas Abbey. If the location can be confirmed, the late-medieval iron furnace depicted in your painting will be unknown to archaeology !!! Of course, Timber-framed buildings with thatched roofs were a feature of pre-industrial East Shropshire. Thus, the presence of a timber-framed, thatched, over-shot watermill is quite appropriate for this particular location.

There is an impressive range of responses coming from HMS members, with only a few outlined here. It seems certain that interest will continue with this particular mystery. It does however demonstrate several points. Firstly, the value of the society’s membership in coming together to assist in single problems. It is no doubt the reason that the society itself was founded therefore it is good to see such active involvement form so many members.

Further the discussions initiated raise a number of questions about the use of art for informing our understand of historic technologies. As Paul Vigor notes these resources have been under utilized most likely because they are treated with suspicion. If Edmond Truffaut is correct and we need to acknowledge that many works of art are indeed pastiche then whilst this offer problems with accuracy it does also offer opportunity in equal measure as it tells the viewer something very definite about the artists origins and influences, all of which can be invaluable when wishing to investigate any particular piece of art. It is clear that we need to develop our understandings of these valuable pieces of evidence to more fully appreciate what they can tell us about the skill and crafts of our forebears

References

Smith, B., 1979, *A View from the Iron Bridge*. Ironbridge: The Ironbridge Gorge Museum Trust: *A View on the River Severn*, pencil drawing by William Williams, p.17. Benthall Edge viewed from the east; *The Cast Iron Bridge near Coalbrook Dale*, pen, ink and watercolour by Michael Angelo Rooker, p.21, Benthall Edge viewed from the east; *et alia*.

Roger Doonan editing comments from
 Alan Willaims
 Edmond Truaffaut
 Katja Boespflug
 Vincent Serneels
 Paul Vigor

Whitecliff furnace restoration

Having been a long standing item on the agendas of many HMS committees it is with joy that HMS NEWS can report the recent awarding of a grant worth £65,000 to help restore the Whitecliff furnace site. The award from the HLF and Forest of Dean Local Action will help establish the site as a significant monument in the Forest of Dean area.



Figure 1: Whitecliff furnace (photo Kate Biggs)

the furnace was never truly successful perhaps been better understood as an experimental furnace that was responsible for driving innovation at the time.

That Whitecliff Ironworks were the locus of much experimentation comes as little surprise when the association with the metallurgist David Mushet is acknowledged. Mushet was an avid experimenter having worked in a number of foundries in Scotland, Sheffield and Derbyshire. At an early age he had been banned from experimenting in his fathers foundry in Scotland for reasons unknown.

Mushet moved to Coleford to take up full-time management of the ironworks in February 1810 having previously been based at Alfreton Ironworks in Derbyshire. He was encouraged to move by Thomas Halford, a wealthy investor from London, who owned two furnaces at Whitecliff. Halford was encountering poor yields and operational difficulties and offered to pay for Mushet's help in overcoming the production problems. Mushet's experimentation proved to be useful for the development of iron metallurgy, in fact his son Robert Mushet helped to develop the steel-making process, but Mushet never succeeded in making Whitecliff a profitable operation. He worked at Whitecliff for six months before leaving and setting up a foundry at nearby Darkhill.

Roger Doonan

Forthcoming conferences

There are a number of forthcoming conferences that are bound to be of interest to all HMS members. The first and most important is the HMS AGM which is being held in Helmsley and coordinated by Ellie Blakelock. It promises to be an excellent event and members are encouraged to attend, it offers a nice blend of papers and opportunities to visit historic metallurgical sites.

Entitled **Religion, Royalty and Rust** the conference runs from the 4th to the 5th of June at Helmsley in North Yorkshire. Papers will include subjects as diverse as Copper bell casting in pre-Hispanic Mexico, Colonization and metallurgy in the 18th century Jesuit missions, Venezuela and 13th Cent Cistercian metalworking in Co. Cork Ireland. HMS chairman, Tim Young will be talking along with Peter Halkon who will be looking at Iron, Myth and Magic. There will be several papers on gold metallurgy whilst Barry Cosham will be reporting on work he has been developing in Ireland on the context of iron smithing in O'Connor Roe Castle. The conference will also offer the opportunity to visit Rievaulx Abbey where HMS member Gerry McDonnell has undertaken so much work on iron smelting along with a tour of Helmsley Castle.

More information can be found on the Society's website at <http://hist-met.org/agm2011.html>

A number of HMS members will also be contributing to the forthcoming **IFA conference** organised by Evelyn Godfrey and held on the afternoon of Wednesday 13th April 2011. The conference runs from 13 - 15 April. The theme for the conference is "understanding significance" and the theme of most interest to HMS members is "Assessing the significance of iron objects and production remains". The session should offer opportunities for experts and professional practitioners to develop ideas about how our ancient and historic industries are dealt with archaeologically.

Speakers include Roger Doonan, Jessie Slater and Derek Pitman (University of Sheffield) who will be looking at how archaeometallurgists now need to consider working in the field and lab, Sarah Paynter (English Heritage) will be drawing attention to what we need to know about iron working. Paul Belford (Nexus Heritage & HMS MPP chair) will be representing the society directly by relaying the role of the Historical Metallurgy Society to professional practitioners. Tim Young (GeoArch & HMS Chairman) will be scoping new horizons in ironworking research whilst Eleanor Blakelock (HMS) will deal with metallographic Analysis. There will also be papers on X-radiography of archaeological iron and the characterisation of metal objects non-destructively. Dana Goodburn-Brown (AMteC Co-op) will be looking at organic materials preserved in corrosion products. HMS is very well represented in the session and promises to be a pleasing mix of professionally relevant papers with a emphasis on developing research perspectives.

Announcements

On a more international note there are several important conferences happening in 2011.

From the 8-12th of November The Baoji Museum of Bronzes in Shaanxi China will be hosting a conference entitled “**The Emergence of Bronze Age Societies: A Global Perspective**”. The conference aims at enhancing our understanding of the background and development of Bronze Age societies on a global scale. It will trace the beginnings of the use of copper and bronze throughout Eurasia and beyond, and investigate the societies that developed metallurgy. Questions to be raised are: What constitutes a Bronze Age? Which characteristics share early bronze using cultures? Is the use of bronze sufficient to define a Bronze Age society? What kinds of artefacts were predominantly produced? Which technological solutions were found in different bronze-using cultures to source raw materials and to produce alloys and artefacts? What was the role of cross-cultural exchange in the development of Bronze Age societies?

The conference especially seeks to provide a platform for integrating the achievements of Chinese archaeological research on the Bronze Age into a world wide context. For this reason the conference will be held in Baoji, Shaanxi province, China, where a major bronze producing centre was located 3000 years ago, and where one of the largest collections of bronze artefacts in all of Asia is stored.

Further details at

<http://www.ucl.ac.uk/archaeology/calendar/articles/20101217>

Archaeometallurgy in Europe 2011 will take place in Bochum from 29th June to 1st July. The aim of this conference is to provide an overview of new insights and new approaches to the history of metallurgy in Europe. “The conference will cover topics relevant to the investigation of the technology and diffusion [sic] of different metals and alloys used in ancient times, and of related (pre-) historic finds such as slag, furnaces, remains of production etc. It will present interdisciplinary scientific and archaeological investigations.

As well as the opportunity to visit Bochum’s excellent mining museum there will be excursions to the Archaeological Museum in Herne. Arranged like an underground excavation site of 3.000 square meters the outstanding museum presents more than 10.000 archaeological finds displaying regional (pre-) history from sites all over Westfalia. In addition, delegates will have the opportunity to visit the Industrial Monument Landschaftspark Duisburg-Nord (a former blast furnace site), which the organisers claim will be an “unforgettable nightly highlight”. The area encompasses a vast industrial heritage of approximately 200 hectares with a decommissioned met-
alworks at its centre.

Roger Doonan

Several HMS members have items of interest which they would like to share with the wider membership.

Allastair MacLeay suspects that members might be interested in a new book, 'Men of Iron' by Robin Thornes which has recently been published by the Frome Society for Local Study (www.fsls.org.uk). It tells the story of the rise and fall of the Fussell family and their edge tool works in the East Mendips together with their other local interests in the Somerset coal-fields, the Dorset and Somerset Canal, railways etc. Allastair considers it a well researched and presented volume that runs to 212 pages.

Jeremy Hoggkinson of the Wealden Iron Research Group suspects that HMS members may be interested to know that Henry Cleere's 1981 doctoral thesis, 'The Iron Industry of Roman Britain', has been made available on the Wealden Iron Research Group's website (www.wealdeniron.org.uk/thesis.htm).

Access is subscription and password free, although subject to usual copyright obligations. The Group is interested in making available other theses/dissertations which are directly relevant to the Wealden iron industry.

Please contact Jeremy Hodgkinson (jshodgkinson@hodgers.com) if you have recommendations.

HMS member Andrew Milward has been researching the iron & coal industry of Meir Heath Staffs. Keen to take advantage of new media octogenarian Andrew has created his own website which can be accessed at www.meirheathwindmill.com.

Members should be aware of the forthcoming Galvanise Festival taking place in Sheffield. There are a number of events celebrating Sheffield’s metallurgical heritage. More information is available at <http://www.galvanizefestival.com/pdfs/brochure2011.pdf>



One particular event which has caught the eye of the HMS NEWS editor is the BABA Festival Forge. This will be held in the fantastic surroundings of Abbeydale Industrial

Hamlet on the Saturday 23 & Sunday 24 April. It is being billed as the largest gathering of blacksmiths in the UK! (with one accompanying bloomery smelter!). Over 20 forges will be in operation with some of the most skilled blacksmiths in the country. It will be a fantastic opportunity to watch hot iron being forged. There

will be plenty of opportunities for to brush up your smithing skills as well as inspect the range of heritage craft pieces. The event is coordinated by Sheffield City Council in association with the British Artist Blacksmiths Association.

Recycling Copperopolis

Swansea Council and Swansea University have signed a significant agreement to work together to give a future to the endangered Copper-works still left in the lower Swansea valley, particularly those around the Hafod Works.

The land was originally put on the market with the hope of stimulating local investment in a development of hotels, restaurant and homes. After a disappointing response the council has teamed up with the University to work on new ideas.



Steam hammer for copper plate – Swansea Museum

The site has twelve, Grade II listed, buildings and structures spanning two centuries of Swansea's copper metallurgical heritage. Whilst the council still sees the potential for commercial development it

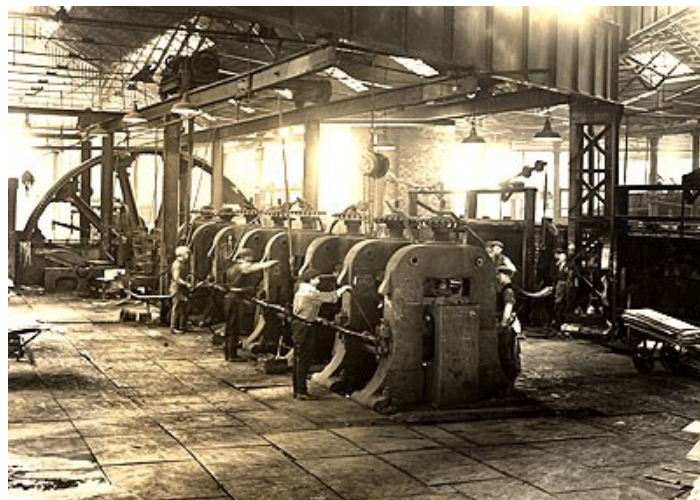
is now working with the university on a feasibility study to preserve and develop the historic buildings on the site.

The University is particularly interested in the potential to develop some of the buildings into "a significant educational and research facility. The development of the site has caused difficulties for the council as economic conditions have made it difficult to attract a partner that shares the council's aspirations for the site.

The site, which will this year mark the 200th anniversary of the first copper ingot rolling out of the Vivian and Sons Copper-works, is made up of more than 12 acres of land close to the River Tawe, the Liberty Stadium and the Parc Morfa retail park. Prof Huw Bowen, who is leading the university project team, said: "Exploring ways of developing the Hafod Copper-works site for the benefit of future generations offers us the chance - perhaps the last chance - of ensuring that visible signs of Swansea's immensely important industrial achievements are not lost forever. He added: "I think it's not exaggerating to say that this is perhaps the most important industrial site in the United Kingdom."

"It's now hoped that the heritage-led feasibility study can find ways of maximising the economic, social and educational potential offered by the Hafod site."

Prof. Huw Bowen who is also working on the ESRC Global and Local Worlds of Welsh Copper project has long argued for the regeneration of these sites. He recognised that there long way to go but we hope that the project will raise much needed awareness amongst people in politics, business, culture, heritage, education and beyond of the importance of the heritage in copper in Wales, and more importantly, the connections it has with other industrial regions in Cornwall/West Devon, Anglesey, Ireland, south Australia, south Africa, Chile, Cuba and beyond with similarly rich copper histories.



Hafod works rolling mill - Swansea Museum.

Recently, (and no doubt interesting to HMS members) Swansea organised a city-wide festival of copper. Cooper day (see <http://www.copperday.org.uk/> for more information) was a day of free events, talks and activities. It proved to be a very popular event and seems likely to become an annual event. It will therefore probably feature on the diaries of many HMS members.

A plea from the Membership Secretary.

Whilst I champion recycling, would members please remember that when recycling the A4 envelopes to return items to the Membership Secretary, to put the correct postage stamp on. A first class stamp does not cover the cost of mailing this size and it involves the Society having to pay the difference from the cost of the stamp applied and the one that should have been applied plus a handling charge which currently is £1.00. The Membership Secretary does not feel that this is a good use of HMS funds. A large letter stamp is required.

Newsletter submissions are welcome at any time, but deadlines for each issue are

1st March, 1st July 1st November
Contributions can be sent in any format (hand-written, typed, email, floppy disk, CD-ROM, etc).
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