**AHG study day and AGM**

**EXPERIMENTAL AND ETHNOGRAPHIC STUDIES RELATING TO ANCIENT GLASS**

**Wednesday 22nd November 2006**  
The Wallace Collection  
Hertford House, Manchester Square, London W1U 3BN

**PROVISIONAL PROGRAMME**

10.00 Arrive/coffee  
10.30 Introduction  
10.40 Thilo Rehren - *Experiments in Bronze Age Egyptian glassmaking* (title to be confirmed)  
11.10 Yvonne Gerber - *The Court Chaluet glass hut and its glass composition*  
11.40 Jan Kock - *Bead and bangle making in India*  
12.10 Lunch (there are a range of pubs, cafes and restaurants locally)  
13.30 AGM of the Association for the History of Glass (AHG members*)  
14.00 St John Simpson - *Glass blowers in Lebanon*  
14.30 To be arranged  
15.00 Tea  
15.30 Sarah Jennings - *A long established workshop of Damascus glass blowers*  
16.00 Frances Liardet - *Being an apprentice in a (Roman) glass workshop*  
16.30 End

If you would like to attend, please send your full contact details, a stamped, addressed envelope and a cheque for £20.00 (full rate) or £10.00 (student) payable to *The Association for the History of Glass Ltd* to: Justine Bayley, English Heritage, Fort Cumberland, Eastney, Portsmouth PO4 9LD.

Participants who normally live outside the UK may pay upon arrival at the venue in UK sterling.

*Members of the AHG who wish to attend only the AGM may do so at no cost*
A detailed programme for the 17th Congress of the Association Internationale pour l'Histoire du Verre (AIHV), including abstracts for the oral and poster presentations, is now available on the website http://www.aihv17.ua.ac.be. For each time slot, there is a choice of two sessions on different subjects, as shown below. A busy social programme is also planned. Payment of the registration fees is preferred before August 1st, 2006.

Monday 4 September 2006
Invited plenary lectures
14h00 – 16h00
Session 1: Roman glass - I
Session 2: 15th and 16th century glass - I

Tuesday 5 September 2006
09h00 – 12h00
Session 3: Pre-Roman and Hellenistic glass - I
Session 4: Glass decoration / enamels
14h00 – 16h00
Session 5: Archaeometry - I
Session 6: Stained glass / weathering

Wednesday 6 September 2006
09h00 – 12h00
Session 7: Roman glass – II
Session 8: 16th and 17th century glass

Thursday 7 September 2006
09h00 – 12h00
Session 9: Post-Roman glass
Session 10: 18th to 21st century glass
14h00 – 16h00
Session 11: Pre-Roman and Hellenistic glass - II
Session 12: Archaeometry - II

Friday 8 September 2006
09h00 – 12h00
Session 13: Roman glass – III
Session 14: 15th and 16th century glass - II

Registration fees for AIHV members € 290
Registration fees for non-members € 330
Student registration fees € 150
Congress dinner € 50
Post-congress excursion € 850
Single occupation supplement € 50

The next meeting of the Association Française pour l'Archéologie du Verre will be in Paris on Friday 17th and Saturday 18th November. Day 1 is at the Musee d'Archeologie Nationale at St Germain en Laye and Day 2 at St Denis. The glass on view is Roman, Merovingian, Carolingian and later. Papers will be on a variety of topics reflecting current research; offers of papers are welcome.

More details are available from:
Nicole Vanpeene / AFAV
10 allée de l’Aube 78310 Maurepas
E-mail: vandy78@club-internet.fr
Website: www.institutduverre.fr/Afaverre/afaverre.php

The International Festival of Glass and British Glass Biennale 2006

25th-28th August 2006
Stourbridge

This year the International Glass Festival and British Glass Biennale will take place over the bank holiday weekend 25th-28th August 2006, in six venues around Stourbridge. The 30-page programme of events contains a wide variety of lectures and exhibitions. The Master Classes and workshops take place in the week before the Festival, between the 21st and 24th August. Early application is recommended. Further information is available from the website: www.ifg.org

One of the most exciting parts of the Festival has to be the hot- and cold-work demonstrations by glass makers from all over the world, including unusual Viking Glass making and Glass Eye making. This year there will be exhibitions and a discussion on Pâte de Verre. There will also be a Professional Artists' Programme, including photography, promoting your work and using alternative fuels. Other activities include two Heritage Walks by the Amblecote Historic Society, Fun Auction, Trade Fair and a 'Glitzy Glass Fashion Finale'.

Last, but by no means least, the British Glass Biennale will be on show at the Ruskin Glass Centre,
from the 25th August to the 17th September 2006.

More information and a programme of events are available from Ruskin Glass Centre
Tel. +44 (0) 1384 399444
E-mail: info@ifg.org.uk
Website: www.ifg.org.uk

8th ESG Conference on Glass Science and Technology

10th-14th September 2006
University of Sunderland

To date almost 200 papers have been offered for presentation, either orally or as posters. The programme is comprised of half day sessions with key themes, and up to five sessions will run simultaneously. A more detailed programme for the conference will be published on the website: www.esg2006.co.uk but details of the speakers in the History and Heritage sessions, which may be of particular interest to Glass News readers, are given below.

One-day registration fee for the main conference is £150, provided applications are received before the 18th August. However a special day rate of £35 (including lunch and refreshments) has been negotiated for members of the AHG wishing to attend the History and Heritage sessions.

PROPOSED PROGRAMME FOR HISTORY & HERITAGE SESSIONS

Dr Robert Brill - The morphology of weathering on historical and archaeological glasses
Dr Russell J. Hand - The Ballidon glass burial experiment: thirty six years on
Dr Sarah Fearn et al. - Room temperature corrosion of museum glass - an investigation using SIMS
Dr Stephen P. Koob - Crizzling glasses: recent developments
Dr Carol M. Jantzen et al. - Relation of activated complex theory (ACT) and atomic ratios to glass durability: laboratory and burial studies
Neil Chapman - Title to be confirmed
Dr Augusta M. Lima - Comparison of a destructive and non-destructive XRF analysis of weathered glass fragments
Professor Norman Tennent - Title to be confirmed
Mr Andy McConnell - The decanter, an illustrated history

Mr Nick Dolan - Glass of the North East in 39 minutes and 53 seconds!
Professor M. Cable - Erik Laxman: a neglected pioneer in glass melting
Professor Ezz Eldin Abd Elaziz Hassan - The style and method of designing, executing and restoring archaeological artistic works made of stained glass in Mohammed Ali’s palace
Ms Sandy Davison - Conservation of decomposed archaeological glass artefacts
Ms Victoria Oakley - Reflections on the care and conservation of unstable glass in historic collections

Dublin Blaschka Congress

September 28th-30th 2006
Dublin

This congress is the first-ever international meeting focussed on the work of glass artists Leopold and Rudolf Blaschka. These 19th century artists produced sculptures that famously include anatomically detailed, scientifically correct models of hundreds of species of marine animals and greatly magnified microscopic organisms that, in many cases, are startlingly realistic. Modern glass artists have been unable to recreate these stunning, intricate sculptures and the father and son team never recorded their techniques. Art and science museums worldwide hold Blaschka sculptures, which are increasingly recognised for their historical, technical, and artistic importance. Bridging the gap between science and art puts the Blaschka’s work in a unique position, which is long overdue for serious study.

The Dublin Blaschka Congress will be hosted by the partnership linking University College Dublin and the National Museum of Ireland (Natural History), in collaboration with the Natural History Museum (London). In addition to academic presentations and informal gatherings, a public exhibition of Blaschka models, never before seen on display, will be held in the National Museum of Ireland (Natural History), Dublin from September through December 2006.

Attendance Fees

Rate Registration Fee
Late Booking Rate €320 / GBP£220 / US$400
Day Rate €160 / GBP£110 / US$200
Submitting papers
The deadline for abstract submissions is 4th August 2006. Submissions are welcome on any topic related to the Blaschkas and their work (or other biological glass models) from the disciplines of the sciences, arts, and craft. Technical proceedings will be published following the Congress, in early 2007.

PROGRAMME

Thursday 28th September
Morning: Registration
Henri Reiling (University of Utrecht)
Afternoon:
David Whitehouse (The Corning Museum of Glass)
Susan Rossi-Wilcox (Harvard Botanical Museum)
Chris Meechan (National Museum Cardiff)
Evening: ‘Museum after dark ice breaker’ in the Natural History Museum, including launch of new Blaschka exhibition

Friday 29th September
Submitted papers (thematic sessions)
Poster sessions

Saturday 30th September
Morning: Submitted papers and focus workshops
Afternoon: Focus workshops and closing plenary address

Please contact the Congress local organiser, Catherine McGuinness with questions or comments:
National Museum of Ireland - Natural History
Merrion Street
Dublin 2, Ireland
Email: blaschka2006@ucd.ie
Or visit the website at: www.ucd.ie/blaschka

A full programme of events may be obtained from the Glass Committee's Chairman:
Gunnel Holmér
Smålands Museum-Swedish Glass Museum
Box 1102
SE-351 04 VÅXJÖ
Sweden
Fax: +46-470 397 44
E-mail: gunnel.holmer@smalandsmuseum.se

ICOM membership and other information may be obtained from:
Victoria Whyte
ICOM UK, c/o Conservation Centre
Whitechapel, Liverpool L1 6HZ
Tel: 0151 478 4986
Fax: 0151 478 4789
E-mail: databaseteam@liverpoolmuseums.org.uk

CRAFTS 2007
International conference

February 28th to March 3rd 2007
University of Zurich

This international conference proposes to present and discuss regional syntheses in a wider context, based on data gathered within the international CRAFTS project "Structures, economic and social role of the Roman craft industry in Italy and in the Western provinces of the Empire". In addition to talks on the work of the regional research groups, presented by invited speakers, space is also reserved for other contributions devoted to research on the craft industry, particularly on the topic "Continuity and change in craft production from the end of the la Tène period to the Roman era and from late Antiquity to the early medieval period". Oral contributions as well as posters are invited. Further information is available from the website and from the organisers (details below).

Address: Tagungsbüro CRAFTS 2007, E.+ S. Deschler-Erb, Universität Zürich, Abteilung Ur- und Frühgeschichte des Historischen Seminars, Karl-Schmidstr. 4/CH - 8006 Zürich

Email: crafts2007@bluewin.ch
Website: www.prehist.unizh.ch
Tel: 0041 61 201 02 44.
Fax: 0041 1 634 49 92

ICOM Glass Committee Meeting

October 15th -21st 2006
Turkey

The International Council of Museums Glass Committee's annual meeting will take place in Turkey, on the 15th-21st October 2006. Many interesting visits are planned to various sites in Turkey, including Istambul, Izmir and Bodrum. Private guides and coaches have been arranged throughout.

Glass News July 2006
PROVISIONAL PROGRAMME

Thursday, March 1
8.15-8.30 Opening comments
Session I: Overview, sources, current research
Speakers include Prof. Stefanie Martin-Kilcher, Prof. Helmut Schneider, Prof. Vincent Serneels and Dr. Sabine Deschler-Erb
12.00-13.30 Lunch break
Session II: Organisation of handicrafts
Speakers include Prof. Hans-Joachim Drexhage, Dr. Kai Ruffing, Dr. Christa Ebnöther and lic. phil. Günther Thüry
15.30: Excursion to Augusta Raurica by bus.
Reception and dinner.

Friday, March 2
Session III: Synthesis and perspectives
Presentations by representatives of regional CRAFTS research groups and other invited speakers, including Dr. Habil. Michel Polfer, Prof. Alain Férrière, Dr. Heidi Amrein, Dr. Habil. Günther Moosbauer, Mag. Kordula Gosten_nik, Prof. Sara Santoro and Prof. Mike Fulford.
12.00-13.30 Lunch break
Session IV: Poster session and vacant time slots for lectures - topical submissions are welcome
19.00 Reception in the Swiss National Museum at Zurich

Saturday, March 3
Session IV: Vacant time slots for lectures - topical submissions are welcome
11.30 Closing discussion

Sunday, March 4
Full day excursion to Avenches

Meeting review:
Glass of the Roman Empire and elsewhere

A CELEBRATION OF THE CONTRIBUTION OF JENNIFER PRICE TO THE STUDY OF ARCHAEOLOGICAL GLASS

14th and 15th March 2006

The meeting was held in the luxurious surroundings of the Wallace Collection with an impressive array of speakers on all aspects of Roman glass and talks spread over two days. Martine Newby chaired the first session on Tuesday, which Marianne Stern began with “East or West – Roman glass is best”. This was an overview of different techniques for shaping glass vessels and when and where the techniques were used. Birgitta Hoffmann described the “Glass from Fezzan, Libya”, an oasis in the middle of the Sahara, prompting an interesting discussion about the 5 enormous glass platters that were recovered (with diameters in excess of 0.4m), and how these may have been used. Souen D.Fontaine (co-authored with Danielle Foy) discussed “Mould-blown glass beakers with figurative scenes: new data on the Narbonensis Province”, highlighting production techniques, styles and subtle differences between examples, and discussing their distribution and possible origins.

Sarah Jennings chaired the session after lunch, which had an archaeological emphasis, beginning with Marie-Do Nenna describing “Primary glass workshops and glass craftsmanship in Graeco-Roman Egypt”. A number of glass production sites are now known in the area, and Marie-Do focused on the exciting discoveries at Beni Salama, where the remains of tank furnaces have been found. Yael Israeli gave us “More on the Jerusalem glass workshop: questions and speculations”. Amongst the large quantities of glass found were fragments of cast bowls, tokens and rod applicators as well as fascinating glass tubes used to blow glass objects and moulds for shaping glass. John Shephard talked about “The glassworkers of Londinium”, highlighting the archaeological evidence for how the glass industry developed over time in Roman London. This was followed by Martine Newby’s wonderful presentation on “Roman glass souvenirs”; her detailed interpretation of depictions on glass objects brought the Roman world vividly to life. The technical problems preceding the showing of the Roman Glass Furnace Project DVD were overcome just as we were all about to give up, but it was well worth the wait (see page 11 for more details about this year’s project)!

During Tuesday evening there was a reception for Professor Jennifer Price, attended by colleagues from throughout her career and family members. Providing a brief summary of Jenny’s exploits and achievements in archaeology and glass research was no easy task but Ian Freestone rose to the challenge, with an abridged version where each decade occupied just a few minutes! Finally the AHG board presented Professor Price with some unique and very apt gifts with thanks for her contributions to glass research. The star attraction was undoubtedly a beaker featuring gladiatorial penguins (see over the page for more details).
The first session on Wednesday, chaired by Justine Bayley, began with a presentation on the “Re-use of Roman Glass Fragments” by Sylvia Fuenschilling. This talk focused on work in Switzerland and France into the reuse of glass fragments, for example as lids or counters. Caroline Jackson summarised the results of analytical studies in Roman glass, in “Sayre and Smith revisited”. This was a clear and concise overview of the scientific work that has shed light on questions of glass production and use, from the groundbreaking work of Turner and Sayre and Smith continuing through to recent discoveries. Hilary Cool gave a well-received and thought provoking discussion of “Vessels and their people: beyond provenance and typology”. This began with an entertaining history of how the field of Roman glass research evolved in England, and culminated by questioning the current direction of glass research and the domination of studies on typology, date or provenance. It was apt, therefore, that Daniel Keller followed, with an involving overview of “Roman glass in the domestic space: from Pompeii to Ephesus and Petra”. Daniel’s talk focused on subjects such as how glass was used, compared with pottery and metal tableware, where it was stored and its visibility. (These themes are also explored in the exhibition reviewed on page 8).

After lunch, in a session chaired by Caroline Jackson, David Whitehouse spoke about “The use of the pontil in the Roman Empire” and his conclusions following a comprehensive study of the different types (or absence) of pontil mark on 621 blown glass objects at The Corning Museum of Glass. Justine Bayley gave a brightly illustrated overview of the use of “Opaque coloured glass in the Roman World”, including mosaics and enamelling. Peter Cosyns talked about “Beyond the channel! That’s quite a different matter. A comparison of Roman black glass from Britannia and Gallia”. This presentation focused largely on black glass bracelets, and investigated where, when and why they were worn, and who by. Ian Freestone concluded the meeting by discussing “Continent to consumer – new approaches to the scientific analysis of Roman glass”. This talk and the following discussion focused on the application of isotope analysis to questions of provenance, and also the potential of particularly reproducible analytical techniques for identifying sets of glass tableware made from a single batch. (This is the work on glass from Stonea in Cambridgeshire referred to by Jenny Price on page 8).

The standard of the presentations throughout the meeting was very high, and it was impossible not to...
learn something on the subject of Roman glass. The meeting also succeeded in celebrating the work of Jenny Price, as the speakers shared memories and anecdotes, spoke of her influence on their work and paid tribute to qualities they admired, such as “clarity of thought and simplicity of expression”. Overall, it was a very enjoyable occasion and, although abstracts were not available for Glass News, it is intended that papers from the meeting will be published in the near future.

Sarah Paynter

The two day meeting in London on Glass of the Roman Empire was held to celebrate the contribution of Professor Jennifer Price to the study of archaeological glass. During the meeting we spoke to Jenny, for Glass News, about her career and glass research in general. (Many thanks to Jenny for forfeiting a coffee break to answer our questions. SP)

How did you become interested in glass?
Well, my family made glass in Stourbridge, and so I always knew how it was made and as a child I used to play in the glasshouse. After I was called to the Bar I went abroad, worked on excavations and spent 6 months sticking the Masada glass together, so when I went to Cardiff to read archaeology I already had a research interest that I’ve never given up.

And was the law useful?
No, not really! It was useful because it told me what I didn’t want to do, and I knew I couldn’t work in it because it didn’t interest me. The idea of doing that, until I retired meant that I wouldn’t have wanted to get up in the morning, so I had to leave it, but it did teach me about the rules of evidence - which has been useful for archaeology.

And you really enjoyed your career change?
Yes, enormously - it was very exciting to have the chance to read archaeology, and I was lucky enough to be able to work in the subject.

Is there a part that you enjoy most: field archaeology or teaching or research?
Well, originally I loved digging, but because there are very few people who work with glass, there was always a lot of glass to study and so I gravitated towards post-excavation work, and that’s where I’ve stayed. I have been happy teaching students, and obviously I enjoy research. I’m not a field archaeologist any more and haven’t run an excavation for about 30 years, but when I was teaching prehistory in Cardiff I excavated a Bronze Age burial barrow in south Wales - which is published! The most fun I ever had as a digger, apart from Masada, was at Stonehenge when we found a skeleton in a ditch when we went to open a trench previously excavated by Stuart Piggott and Richard Atkinson for John Evans to get some snail samples. Denise Allen and I were in the hole when the toes appeared in the section, and so we dug the skeleton - it was a wonderful and most unexpected find - and the first Beaker period stiff found there.

What’s the contribution that you’re most proud of; can you pick a couple of things?
I’m glad there are more people working with glass in Britain now than when I started, though I don’t claim to have influenced many of them. I’m very happy to have had the opportunity to work on the EH-funded Romano-British glass project with Hilary Cool, Sally Cottam and Sally Worrell. They all brought new ideas to the subject, and together we moved Romano-British glass studies forward in ways I could not have done on my own - working on your own can be rather arid. When I started in glass there were two main glass specialists, Donald Harden who was about to retire as Director of the London Museum and Dorothy Charlesworth who was a Ministry of Works (now EH) inspector, and George Boon in the National Museum of Wales in Cardiff was also interested. Donald invited me to work on the Fishbourne glass with him in 1969 and generally encouraged me, as did George, and Dorothy accepted that I was there, but there were very few opportunities to meet and discuss things. By contrast, there now is a much bigger group of people who meet at conferences like this one and exchange ideas and news. I think we have managed to demystify the study of archaeological glass - there are more books and articles and more people are confident about writing their own reports.

What do you see as the big things for the future, for you and the field?
For me, I think I’ve done my time writing reports on bits of glass because they have come from particular holes in the ground and I now want to write about things that interest me that move different strands of research forward, to produce summaries of work I have done and conclusions I have reached. I have done a lot of work in Britain and Spain and some in France and Italy and Greece and north Africa and I
plan to complete my current commitments and then to
explore some regional and empire-wide themes. That
should keep me going into my dotage!

For the field, I am convinced that the best thing that’s
happened in the study of archaeological glass is the
way that scientists and archaeologists now talk to
each other and work together, and that many of the
exciting discoveries in future will come from these
collaborations. At one time, I didn’t have much
interest in scientific analysis because I kept being told
what made glass blue and didn’t find it useful, and
also didn’t see any point in analysing pieces of glass
unless we knew what shape the vessels had been and
when they were made. However, in recent years
programmes of analyses of vessels of known form
and date have produced really interesting
archaeological results, as, for example in the work in
Britain on four groups of colourless vessels from
Colchester and Lincoln and Binchester and elsewhere
- the benefits seem to be cumulative. The science is
really exciting because it has caused us to think in
different ways about how glass was made, and where
it comes from, and about the processes of vessel
production and distribution. The realisation that all
the glass cups of a certain type found at Stonea in
Cambridgeshire may have arrived in a single packing
case would simply not have been possible without
glass scientists and archaeologists working together.

You’ve enjoyed the conference?
Oh enormously! It’s been wonderful.

Art et sciences – le verre dans
l’Empire Romain
Exhibition review

Cité des sciences et l’industrie, Paris
31st Jan-27th August 2006

An exhibition of glass from Pompeii, Herculaneum
and the surrounding region, Le Verre dans l’Empire
Romain, is on display at the Cité des Sciences et
d’Industrie de la Villette, 30 avenue Corentin Cariou,
75019 Paris (Tuesday-Sunday, 10am-6pm) until 27th
August

This exhibition was first staged in the Palais Pitti in
Florence in 2004, and is now in the huge exhibition
hall in the Cité des sciences et l’industrie in La
Villette, Paris. The ticket rather bizarrely allows joint
access to this and a major Star Wars exhibition, with
light sabre sound effects floating across the space in
between. Hence the many entries in the visitors’ book
along the lines of ‘We came to see Jabba the Hut, but
our teacher/parents made us see this boring glass
exhibition too’……. which do not do it justice at all.

Although the title is Glass in the Roman Empire,
nearly all the material displayed is from Pompeii and,
to a lesser extent, other Vesuvian sites. Another
comment in the visitors book (this time from an
archaeologist – although I wouldn’t be surprised if
some of those comments mentioned above weren’t
made by archaeologists as well) quite rightly suggests
that it should better be entitled ‘The use of Glass in
Pompeii during the 1st century AD’. It does an
excellent job of examining the many and diverse uses
of this versatile material as illustrated by the artefacts
and buildings of these sites, and displays many finds
which have not seen the light of day in the National
Archaeological Museum in Naples Museum for a very
long time, if ever.

There is a brief introduction to the history of glass-
making and a survey of what ancient scientists and
philosophers said about glass. Large display boards
with quotes from ancient authors are in French only,
although the other labels are all in English too.
Artefacts include some iron pincers from Pompeii,
which may have been used for glass-making although
the direct association is not clear (Fig. 2), the lamp
showing a glass furnace with glass-blowing from
Ferrara, and there is mention of finds of glass
fragments awaiting re-use, including three amphorae-
full found during excavations in 1997 in Pompeii
Regio I,14,14. A display showing the diversity of
shapes and decorations used for glass vessels includes
a very good facsimile of the Blue Vase from Pompeii
– when the exhibition was in the Pitti Gallery the
original vessel was moved there (leaving a sad and
empty case in Naples museum) but it was not allowed
to go to Paris too.

![Figure 2. Pincers that may have been used for glass-working](image-url)
So far so traditional – but there is then a room with a number of vessel assemblages from specific houses in Regio 1 in Pompeii, reunited in their entirety, and including those of other materials such as bronze and pottery. This provokes a brief discussion as to why some householders preferred glass vessels to other materials and vice versa, and what this might mean in terms of conflict between ceramics and glass for fine dining wares and other domestic vessels: “The overall analysis of the materials conserved in these habitations shows that glass, for its transparency, light weight and elegance, was by now preferred over fine ceramics for dining. At the same time it performed a significant though not preponderant role in domestic activities concerning the preservation of foods as we can see in the still consistent presence of clay and bronze containers. The role of glass seems to be exclusive, however, in containers for unguents and perfumes, as widely attested in the Vesuvian area.” It was certainly good to see the full assemblages displayed like this, with a big graphic map of the houses from which they came, together with some of the most famous wall-paintings with still-life scenes including glass vessels. Since the wall-paintings rooms in Naples Museum have been closed for years, it was a real treat to see these originals (Fig 3).

There is also a reconstruction of the wooden box with (original) bronze fittings which contained several glass vessels from the House of the Menander, and several bottles with lids and contents still surviving (Fig 4), although neither the labels nor the catalogue have any sort of explanation of what the lids/stoppers are made of, nor what analysis has been done on the contents. This survey of vessels includes a section on glass used in medicine and cosmetics, including ventouses.

Window glass is examined, displaying some wonderful big panes of both glass and mica, and including a reconstruction of the glazed peristyle in the House of the Mosaic Atrium at Herculaneum (Fig 5). Circular windows are included in the catalogue, but none of the domed windows that have attracted attention recently. This room also reminds us that glasshouses for cucumbers are mentioned by Pliny and Columella, with a model of a mobile cucumber cart.

Figure 3. A wall painting with still-life scenes showing glass vessels in use

Figure 4. Glass bottles with surviving lids and contents

Figure 5. The reconstruction of the glazed peristyle in the House of the Mosaic Atrium at Herculaneum

The display on mirrors includes a rectangular obsidian
panel which was set in the wall of the House of the Ephebe, and there is a picture of the lozenge-shaped panels of the same material from the House of the Golden Cupids. There is also a rectangular polychrome panel from an unknown Pompeian house wall with a gilded and painted cupid – similar to the circular panels that also came from the House of the Golden Cupids, showing how both natural and manufactured glass were used to decorate houses.

When polychrome glass mosaics are considered too, one realises just how much glass must have existed in all sorts of architectural contexts around these towns.

Finally, cases with prisms of rock crystal (and a wall-painting of a rainbow), small spheres of glass and crystal (did the Romans play marbles?), lenses (with a lovely wall painting from the Temple of Isis showing someone short-sightedly reading a scroll by holding it at arm's length) (Fig 6), statues with glass eyes, and one of the very fine miniature painted portraits on a glass panel, all from Pompeii, remind us of the many uses of glass beyond vessels and architecture. Ancient ingenuity is then emphasised further by models of some of the scientific devices described by Hero and other authors, including a glass drinking horn with siphon, a toy with rotating figures inside a glass cover powered by hot air, a glass Barullion for measuring the density of liquids, and other astronomical instruments which involve the use of glass.

This is, then, a very thorough introduction to how widespread the use of glass had become by the 1st century AD, covering almost all the uses to which it is still put to today. There is plenty of food for thought, completely covering (and much more thoroughly examining) some of the ideas about glass that had been germinating in my mind after many visits to Pompeii and the other Vesuvian sites over the last decade or so. There is now the perfect opportunity for someone with time and resources to take some of these ideas further and examine them in more detail.

The exhibition will be in Paris until 27th August, and it would be really excellent if it could then be moved as a permanent display to the Naples Museum (possibly the most frustrating museum in the world), instead of disappearing back into the stores again. The catalogue, available only in French, is excellent too, with very good pictures. It costs €39 (published 2006 by the Cité des Sciences et de l’industrie – see under books on page 16 – and an earlier version in Italian was also published in 2004).

Denise Allen
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Exhibition of Roman Glass

Until 31st October
Malton

A small exhibition of Roman Glass is on display in the museum in Malton, north Yorkshire until 31st October (open 10am-4pm). It features glass fragments excavated in the fort and vicus, and more complete vessels from the Yorkshire Museum in York and Hull City Museum.

Exhibitions Database
The Corning Museum of Glass

A new searchable online database offers web users the ability to search for past, present and upcoming temporary glass exhibitions around the...
world. Compiled and maintained by The Juliette K. and Leonard S. Rakow Research Library of The Corning Museum of Glass, the Worldwide Glass Exhibition Database can be found at: www.cmog.org/exhibitionsdatabase. The database currently provides information about more than 29,000 exhibitions, based on information the Rakow Library has received since 1982. Users may conduct a general search using keywords or such qualifiers as institution name or show dates. Organisations that wish to include their exhibitions can contribute information by going to the site and clicking “Contribute an Exhibition.”

The Rakow Library currently holds more than 300,000 items relating to the art, history, craft and technology of glass and early glassmaking. The library is open to the public; visitors may also access the Rakow Library’s online public access catalogue (OPAC) at http://rakow.cmog.org to search the library’s record of holdings and find citations to glass-related periodical articles.

See the previous issue of Glass News (No. 19), or the website www.cmog.org, for details of exhibitions currently running at The Corning Museum, including 'Glass of the Maharajahs: European Cut Glass Furniture for Indian Royalty' and ‘Splitting the rainbow: cut glass in colour’.

Roman Glass Furnace Project 2006

Encouraged by the success of last year's experiment with two Roman-style, wood-fired glassblowing furnaces (see Glass News 18, 2005), Mark Taylor and David Hill continued to explore early glassworking practices in 2006. This year we re-fired our larger furnace, built and ran a completely new smaller furnace, and constructed a completely new annealing oven.

Until we began hand-building these wood-fired daub furnaces, it did not occur to us that their very design and structure are dictated by the working practises of the individual glassmaker and his team. Although we can never be certain that the structures we built resemble those used by early glassmakers, certain design elements were crucial to the demands of glassworking and so the furnace began to determine its own shape and direction. We know that the circular (or oval) fire pits of ancient furnaces were often lined using large roof tile fragments crudely layered in a manner similar to brickwork. These tiles or stones (found below the original ground level) have usually survived the intervening millennia but evidence for the furnace structures above ground is seldom present. One reason for this may be that these structures were made from a variety of daub (clay tempered with hay and sand). Daub (despite its partial firing during use), if unsheltered, simply cannot withstand the attacks of the elements, and eventually disintegrates, as did much of the (deliberately) exposed furnace from our experiments last year.

We built our new, smaller furnace re-using the completely intact tile-layered, fire pit from last year's one, and began by forming daub walls to a thickness of about 0.15m, initially in a horseshoe shape around the back of the circular pit. At the front, the walls were extended outwards to create a short tunnel over the fuel chute, which led into the fire chamber. From then upwards, as mentioned above, many elements of the basic design practically ‘took over’!

Figure 7. The rebuilt smaller furnace with gathering holes on either side, plus doors supported on shelves beneath, and the fuel chute in the foreground.

We knew that the furnace needed to be conical in shape in order to help it to support its own weight. The gathering holes needed to be set at a certain height in order for the glassblower to be able to gather glass from a seated position. This in turn dictated the height that any glass pot (or tank) would need to be placed on the inside of the furnace, and established the height of the horizontal external shelf necessary to hold the doors used to close the gathering holes. The angle from the horizontal at which the glassmaker

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gathers from the glass pot dictates the maximum upper height necessary for a gathering hole. Once past this point, there is little necessity to continue building the height of the furnace, so it was brought inwards to a gently rounded 'roof' (Figure 7). The finished structure proves strikingly similar in appearance to the glassblowing furnace depicted on the three surviving Roman oil lamps (Figure 8).

Last year's project established that a huge variety and quantity of glass vessels can quite easily be blown using what appears, at least initially, to be a very simple type of furnace. This year we wanted to add to the range of glassmaking techniques that we could demonstrate and set out to explore how bowls and windows could have been made using a variation of the same basic furnace. We have successfully reproduced many window panes and mosaic and ribbed bowls in our 'modern' workshop, but the challenge was to use these same techniques at the reproduction Roman furnace, and with an absolute minimum of basic tools and equipment, such as would have been readily available to early glassmakers. Therefore we adapted one of the gathering holes of the much larger main furnace to work exclusively with so-called Roman 'cast' glass, specifically window panes and ribbed bowls, both monochrome and mosaic.

We constructed a shelf projecting from, and level with, the largest of the three gathering holes, using a slab of sandstone. This gave us a generous flat table upon which to rest the very basic tool (which we refer to as a bat'leth), on which the window panes and bowls are balanced, enabling us to easily slide them in and out of the main body of the furnace for re-heating, and giving a firm base upon which to manipulate the glass (Figure 9).

With practice, we were able to make numerous window panes, and quite a few ribbed bowls using the standard Roman blue / green glass recipe, and were also able to fuse, pinch and slump several mosaic ribbed bowls as well. As in our modern workshop, we found that closely co-ordinated teamwork is essential in order to make these vessels successfully. Although we had the luxury of modern temperature indication equipment to enable us to monitor and record the heat of the furnaces throughout the project, we found that when working on the ribbed bowls, there was no time to consult the readings every few seconds. Instead, the glassmaker tooling the objects (Mark) relied upon working closely with the stoker, informing him whenever he particularly needed more heat for the manipulation of the glass. (We were especially grateful for the talents of our skilled stoker, Steve Wagstaff, to consistently maintain temperatures around 1100°C whilst making the bowls!) The Romans had no temperature indicators, of course, so Mark simply relied on the 'feel' of the hot glass when working, as they would have done.

We also devoted time to making ceramic moulds for several common 1st century AD vessels, including
small bottles, an almond knobbed or ‘lotus' beaker, and the small 'date' flasks. These worked extremely well, exceeding our expectations, and demonstrated that, with care, many vessels could easily be produced from each mould, provided they were not allowed to over-heat or break through rough handling. We held two ‘Glass Specialists' Days, and were joined for these by William Gudenrath from the Corning Museum of Glass. As well as working with Mark on Roman pieces, Bill demonstrated his own speciality - the Venetian style of glass blowing using a cristallo composition glass Mark had prepared (Figure 10).

Figure 10. Bill Gudenrath, of The Corning Museum of Glass, demonstrating Venetian glass blowing using cristallo glass.

Further details of the project will appear on our website www.romanglassmakers.co.uk in due course, where many photographs of this, and last year's, projects can be seen. Mark and David wish to thank the Association for the History of Glass, Andante Travel and SE Validation Ltd. for their contributions to the project, and Elaine Wakefield of Wessex Archaeology for the use of photographs.

The Roman Glassmakers, Tel: 01264 889688 vitrearii@romanglassmakers.co.uk

‘Charles Burney.... in the course of researching his great General History of Music in the 1770s, came face to face with a Javanese gambang, a relic of a gamelan orchestra that now stood isolated and silent'. With its ‘bars of wood of differing lengths, as sonorous as if they had been made of metal, placed across a hollow vessel resembling the hulk of a ship’, it resembled nothing that Burney knew, except perhaps some kind of Sticcado (presumably the Sticcado Pastrole, a species of glass-barred xylophone that enjoyed some vogue in 18th century London). Peter Cosyns also kindly sent details of glass musical instruments in the MIM (Musical Instrument Museum) in the centre of Brussels, including two glass trumpets and a kind of piano with glass ‘bells’. The MIM website is at: www.mim.fgov.be.

More information was received from Jan Kock concerning two glass harmonicas in Denmark: one in the Musikhistorisk Museum in Copenhagen and the other at the Society of Music at the Holmegaard Glassworks. Both date from the 19th century and feature a number of glass bowls of differing sizes mounted on an iron bar that is turned by a handle. The Music Society at Holmegaard also plays glass instruments blown at the glassworks (see also the Unusual glass auction, below).

Sandra Davison

Unusual glass auction

21st-23rd September 2006
Durham University

The 46th Annual Symposium of the British Society of Scientific Glassblowers (BSSG) will take place on the 21st-23rd September 2006 at St Aiden's College, Durham University. The BSSG has invited its members to make items with a musical theme for sale at this year's Charity Auction during the symposium. This is your chance to acquire the collectables of the future, although there is no mention of the musical quality required of the instruments! [Editor's note: We would like to hear from anyone who attends this auction.]

Further information about the Symposium or the Auction may be obtained from BSSG Chairman Ian Pearson. Tel: 01847 802629/895637, or e-mail: ian.pearson@ukaea.org.uk

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The Corpus Vitrearum Medii Aevi has augmented the conservation section of its website at www.cvma.ac.uk with translations (from German) of a number of important recent articles on the latest developments in stained-glass conservation. These will be invaluable to all those engaged in the subject. The papers can be downloaded free of charge.

The Corning Museum of Glass has awarded 2006 Rakow Grants for Glass Research to two scholars, one being a member of the AHG board, Sarah Jennings. Sarah’s grant is for the editing and layout of her book, *Vessel Glass from Beirut*. This volume will report on an extensive collection of glass vessel fragments, dating from 300 B.C. to 1500 A.D., and recovered from three sites. The initial research was funded by a 1996 Rakow Grant. The book will be the first major publication on a large group of dated glass from the area of Lebanon, and is expected to contain about 500 pages, more than 1,600 line drawings, 75 photographs, and 13 tables. Sarah anticipates that the book will be published by the summer of 2006. The printing of the volume will be supported by a grant from the American University of Beirut.

There are however difficulties over the treatment of the evidence, of which the reader should be warned. The excavation archive formed part of the Museum of London’s publication backlog for some years, which presented the authors with difficulties over the completeness of the record. A particular problem is the assessment of the main glass furnace, of whose flue depth no record has been found (pp.34-5). Beyond such basic matters of evidence, it is hard to accept some of the conclusions set out in the report. The most important mis-interpretation is over the functioning of the main furnace. The excavated remains resembled the examples at Kimmeridge (Dorset), Denton (Greater Manchester) and Bolsterstone (Yorkshire), all of which possessed air-intake flues built in trenches below siege level. It is stated (p.33) that ‘air entered the furnace through the north-western opening, fed the centrally located fire and then exited the furnace through the south-eastern flue.’ This is in conflict with 18th and early-19th-century descriptions of glass furnaces, where it is clear that air was drawn through multiple flues by the carefully-designed configuration of the furnace superstructure, with smoke exiting through gathering holes. The authors’ unworkable conclusion appears to have arisen from the interpretation of a feature seen only in the north-west flue as the housing for a shutter to regulate the entry of draught. This is not a feature known from contemporary descriptions, but if its function were as envisaged, one has to ask whether such a shutter might also have been placed at the south-east end of the system. This possibility is not discussed on p.35.

The other problem over structures lies in the interpretation of the secondary furnace. The juxtaposition with the main furnace is shown in plan in fig 23 (p.29), where the secondary furnace appears to be so close to the south side of the melting furnace that it would be impossible to operate at the south...
gathering holes of the latter if the furnaces were contemporary. There is no published section to illustrate the stratigraphic and chronological relationship of these furnaces. The function of the secondary furnace is stated to be for fritting rather than for annealing, but without convincing evidence.

The treatment of the residues contains significant misunderstandings and omissions. Gall should have been described as a layer of alkali sulphates forming on, and skimmed from, the top of the pot. Lime improves the durability of glass rather than affecting viscosity. The scientific evidence is hard to understand, in particular the extent to which high-lead glasses were present. It is mentioned that results of ICPS (inductively coupled plasma spectrometry) showed low lead content, which subsequent EDX (energy-dispersive X-ray) analysis showed to be incorrect. This reviewer has learned that much scientific work was done at a late stage, as a result of referees’ comments, which, regrettably, has not been incorporated in the published report. It is understood that this work will be published in Post-Medieval Archaeology in order to set the record straight.

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LES VERRES ANTIQUES DU MUSÉE DU LOUVRE, II.

Véronique Arveiller-Dulong and Marie-Dominique Nenna

Paris: Musée du Louvre, Somogy, 2005
679 pages, 290 mm
Price: 99 €.

For more information:
Website: http://www.louvre.fr

‘Corpus des signatures et marques sur verres antiques. 1 – La France’ is a comprehensive study (245 pages of text, 139 plates) containing essays on the interpretation of signatures and designs on glass vessels and four regional surveys of the material, as well as a descriptive corpus of the signatures and designs on cups and bowls, square bottles and jars, rectangular, hexagonal and Mercury bottles, unguentaria, cylindrical bottles with corrugated bodies found in France, and pieces from elsewhere held in French museums. It is a very useful collection of information and will be an invaluable tool for students of glass in the western provinces.

‘Les verres antiques du Musée du Louvre, II’ is a large book (679 pages), the second of the catalogues of ancient glass in the Louvre, has studied 1349 vessels from the first to the beginning of the seventh century AD. It contains blown and mould-blown pieces from five departments (Greek, Etruscan and Roman; Egyptian; Oriental; Islamic; objets d’Art) and these have been arranged in three chronological groups and sub-divided by regions of the Roman world, with a short introductory essay at the beginning of each section. A small section of corrigenda for volume I and 14 additional core-formed and moulded vessels and fragments has also been included (on pages 501-5). There is a great deal of information throughout, and the catalogue entries are clear and detailed. They are accompanied by black-and-white photographs, with some colour plates, and line drawings at the end. The book is a most valuable addition to the growing list of catalogues of ancient glass in museums, and it is very easy to use (though you have to be strong to lift it!)

Jenny Price

CORPUS DES SIGNATURES ET MARQUES SUR VERRES ANTIQUES. 1 – LA FRANCE.

Danielle Foy and Marie-Dominique Nenna (eds.)


Price (including postage in European Union): €53.00 (Payment by postal transfer).

Available by contacting:
Nicole Vanpeene, 10 allée de l’Aube – 78310 Maurepas
E-mail: vandy78@club-internet.fr

For more information:
Website: www.institutduverre.fr/Afaverre/afaverre.php
Books

LE VERRE DANS L'EMPIRE ROMAIN: ARTS ET SCIENCES

Marco Beretta
ISBN: 271185163X
360 pages, colour illustrations, French
Cité des Sciences et de l’industrie, Paris, 2006
Price: 39 €

This is the catalogue for the exhibition Art et Sciences - Le Verre dans l’Empire Romain (see the review on page 5)

A HISTORY OF GLASSMAKING IN ENGLAND

Hugh Wilmott
ISBN: 0752431315
Paperback, 208 pages, 16 Colour Pages, 248x172 mm
Tempus Publishing Ltd, 2005
Price: £19.99

NEW GLASS REVIEW

The New Glass Review is published annually by The Corning Museum of Glass. Every year invitations are sent worldwide to glassmakers to submit slides of work made during a one-year period and jurors choose 100 slides for publication in the next issue. The publication also includes the Juror's Choice section, where each juror is allowed to choose 'up to 10 examples of work in glass, either recent or historical, that impressed them during the year' and reflects their particular interests. New Glass Review 28 has recently appeared and includes work from 20 countries designed and made between 1 October 2005 and 15 September 2006.

To buy current and previous copies of New Glass Review, for further information and application forms, please go to the Museum's website: www.cmog.org

THE NAILSEA GLASSWORKS, NAILSEA, NORTH SOMERSET

Andrew F Smith
Paperback, 253 pages, 295 x 210 mm
Heritage Marketing and Publications Ltd, 2006
Price: £40

The Nailsea Glassworks was established in 1788 and ceased production in 1873. The site of the glassworks was developed by Tesco Stores Limited, who sponsored an archaeological study by Avon Archaeological Unit. The product is this publication, which includes an introduction, the results of the archaeological desk-top study, a summary of the known archaeological interventions from 1975-2004, a review of the technology and an account of the human story, describing the economic and social impact. It is well illustrated, with numerous plans and colour figures.

Available from:
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Avondale Business Centre, Woodland Way,
Kingswood, Bristol, BS15 1AW
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