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WELCOME...

...to this the second issue of Glass News. This issue includes the second part of Hugh Tait's review of recent catalogues of glass published by museums in Europe and further afield; Ian Freestone and Cath Mortimer survey recent advances in the scientific analysis of early glass; there are notes on archaeological work on the site of a 19th-century glassworks in Southwark, on the lifting of a 16th-century furnace in Staffordshire, on an experimental Roman furnace in Suffolk; we list recent publications, current exhibitions and forthcoming conferences; and for those who have access to the Internet, we highlight a few interesting Web sites.

The first issue of Glass News was distributed widely, free of charge, thanks to a subvention from the funds of the Association for the History of Glass and the co-operation of the Glass Association, the Glass Circle and the Society of Glass Technology, who included copies in their mailings to their own members. As a result, some people will have received two, three or possibly more copies – we hope they did not find this too intrusive, and were able to pass them on to others they felt might be interested. This issue is being sent (one copy each!) only to those who have paid their subscription. Since we asked subscribers to indicate on the application form the nature of their interest in glass we have a good idea of the range this covers – all periods of glass and all aspects, including technology and archaeology, collecting and conservation, scientific analysis and manufacture. Our aim is that each issue should contain something to attract all our readers, and the wide range of your interests will keep us on our toes. However, part of the onus must fall on *you*. Our Editor, John Shepherd, and the other members of the Board of the AHG will do their best to keep up to date with what is going on in the world of glass, but we don't claim omniscience! If you are involved in a new publication,

exhibition or project, if you become aware of one worth publicising, if you have a note, a query, a 'problem piece' for our next issue please get in touch with John Shepherd at the Museum of London (phone, fax, post and e-mail addresses all below). Contributions for the next issue should preferably reach him by 1 March 1997.

At the time of writing we have about 160 subscribers, mostly in Britain, but as far afield as South Africa. It's a reasonable start, but we obviously need to increase our numbers. We know that out there (and indeed not so very far from the office where I am writing this) there are people who read and enjoyed the first issue but forgot to send their subscriptions in. So when you get *your* copy of this issue please show it around among your friends and colleagues – remind them that the subscription is just £3 until the end of 1997 and that they will get this issue (plus the first if they missed it) and two further issues for that amount.

Most of our subscribers so far are individuals, but even a cash-strapped university library may be able to find £3, so if you work in the academic world, in a museum or other public body do point out to your librarian that Glass News is a good thing – invoices and/or receipts can be provided on request. Subscriptions should be sent, as before, to John Clark at the Museum of London – a reminder that cheques should be made payable to the 'Association for the History of Glass Ltd'. (It is an interesting statistic that about 5% of cheques received so far had to be returned because in one way or another they were wrongly made out!) Subscribers from abroad are asked to find the most effective way of remitting payment in sterling.

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(illustrations by Michael Bayley)

Recent analytical studies on glass

This survey reviews some of the papers which we feel have increased our understanding of glass composition, with a publication date between 1990 and 1995. The selection is necessarily personal, and we have tended to restrict it to two or three papers per topic. We have not included our own work. Here, we focus upon studies of European glass, of Iron Age to medieval date. For recent work on cobalt blue glass, see the last issue of *Glass News*. We hope to look at other topics in future newsletters.

Celtic enamelling frequently features opaque red ('sealing wax') glass inlays; a study of European examples (Brun and Pernot 1992) indicates that they are all heavily-lead soda-lime-silica glasses coloured with cuprous oxide, although examples from Mont-Beuvray (France) were distinguished by containing significant manganese levels, as well as lower iron and lead contents. It is still not possible to suggest where opaque red glass was made at this time, but the compositional homogeneity suggests a small number of centres were involved. This enamel type continued to be used in the Roman period but, in addition, new brownish-red types were introduced (Henderson 1993a). These have lower copper and lead contents, but some have a distinctive high magnesium content; which may indicate Middle Eastern connections, since most of the Roman world had changed to using low magnesium glasses. Henderson also reviews the glasses used for other enamel colours. Both of these papers feature dramatic and informative photomicrographs of the inclusions found in enamels. These give information about manufacture but they also illustrate the heterogeneity of these materials and serve to caution analysts attempting to obtain a representative 'bulk' composition.

It has long been suggested that it might be possible to use chemical analysis to fingerprint the products of different Roman vessel glass manufacturing centres, but this now seems to be unlikely. Recent studies show that there is very little compositional difference between glass vessel types (Jackson *et al* 1991). However, it does appear that there are some interesting differences in the amount of variation or spread of composition within glass vessel types, which in itself may have potential to characterise the output of particular production centres (Baxter *et al* 1995). Furthermore, chronologically-based groupings have successfully been identified within the compositions of vessels from Italy (Mirti *et al* 1993).

The change from the typical Roman soda-lime-silica glass to the medieval potash-lime-silica glasses, based on the use of a wood ash flux, took place in northern Europe towards the end of the first millennium AD. Henderson (1993b) has shown that transitional or mixed compositions occur in 9th- to 10th-century Britain, presumably when the older, soda-rich glass was still being recycled as cullet. The composition of medieval 'forest' glass changed little, if at all, over several centuries, but a new 'forest' glass composition, with much higher lime and lower alkali, became dominant in the 16th



century. Recent work by Hartmann (1994), Wedepohl (1993) and others has explored the reasons for this change. By investigating the raw materials available locally, Hartmann deduced that the 'woodash-lime' glasses of the Eichsfeld region (Germany) must have been made by reducing the amount of ash used, possibly in response to local economic factors, as in England. In place of the ash, lime was added, probably in the form of limestone. Interestingly, Hartmann suggests that the relatively high zinc and chlorine contents of the glasses are indicative of the use of the ashes of grass or reeds, as well as beech ash.

The high-lead glasses of the medieval period are distinctive for their glossy, often colourful appearance. Three types of high lead glasses were found in various parts of north-west Europe: lead-silica glasses, with low levels of all other elements; leaded potash glasses, essentially forest glass compositions with added lead oxide; and leaded soda glasses (Wedepohl *et al* 1995). The same study flags up the possibility of using lead isotope ratios to investigate the source of the lead used in high lead glasses, although little data is as yet available.

Venetian fine wares and their precursors have always attracted interest, from analysts as well as curators and collectors. In particular, the origin of the famous enamelled 'Aldrevandin' type of glass, believed by many authorities to represent the earliest Venetian enamelled glasses, has been discussed extensively. Recent analyses by Verità (1995) indicate that the colourless glasses and enamels used to make examples found in Germany and Italy were closely comparable with those of contemporary Islamic glasses (Henderson and Allan 1990). This is clearly suggestive of a degree of technological transfer between the Near East and Europe, but just how this was achieved is far from clear at present.

The Publications

Baxter M J, Cool H E M, Heyworth M and Jackson C (1995) Compositional variability in colourless Roman vessel glass. *Archaeometry* 37, 129-142.

Brun N and Pernot M (1992) The opaque red glass of Celtic enamels from continental Europe. *Archaeometry* 34, 235-252.

Hartmann G (1994) Late medieval glass manufacture in the Eichsfeld region (Thuringia, Germany) *Chem. Erde* 54, 103-128.
Henderson, J. (1993a) Technological characteristics of Roman enamels. *Jewellery Studies* 5, pp.65-76.

Excavations In Hopton Street, Southwark

Redevelopment at 47-67 Hopton Street, Southwark, London, just to the east of Blackfriars Bridge, was preceded by an archaeological evaluation in November 1994 and a major excavation in 1996. The works were undertaken by Pre-Construct Archaeology, on behalf of the Manhattan Loft Corporation Ltd who generously funded the project.

Historic sources indicated the foundation of a glasshouse (manufactory) on this site during the early 19th century. It was established by 1814, in the name of Green and Pellatt, and underwent many modifications until the company moved premises in 1878¹. The firm is well-known for its manufacture of fine wares, including lead crystal glass, chandeliers and optical glass, as well as window glass. There are, however, references to glass working on two adjacent sites in Southwark as early as 1688².

The excavations revealed parts of the 19th-century glasshouse and also the remains of a previously undocumented glasshouse dating to the late 17th or early 18th century. This comprised a furnace with two opposing sieges, waste glass products and other associated buildings. Evidence for the later, documented, glasshouse took the form of brick foundations, walls and floors, with some later additions and alterations. Associated finds included fragments of

coloured and plain fine vessels, chandelier and window glass and dumps of ground cullet. No evidence of the furnaces themselves were present, although an illustration of 1820 suggests these may have been to the north of the area of excavation³.

Analysis of the structural and artefactual evidence is continuing and detailed reports are expected to be completed during 1997.

Further details can be obtained from:

Victoria Ridgeway
Pre-Construct Archaeology
Creekside Wharf
The Stowage
Deptford, London SE8 3DF.

Notes

1. A History of the Falcon Glasshouse at Hopton Street, Parish of Christ Church, Southwark, c1814-1878, Roy G. Bendrey in: An Archaeological Field Evaluation at 47-67 Hopton Street, Southwark, by Gary Brown, Pre-Construct Archaeology, unpublished report.
2. In a petition, of 12th August 1688, that His Majesty "would put a stop to the erection of such glasshouses..."
3. Guildhall Library, London.

continued from page 2

Henderson J (1993b) Aspects of early medieval glass production in Britain. *Ann. 12e Cong AIHV* 247-259.

Henderson J and Allan J (1991) Enamels on Ayyubid and Mamluk glass fragments. *Archeomaterials* 4, 167-183.

Jackson C M, Hunter J R, Warren S E and Cool HEM (1991) The analysis of blue-green glass and glassy waste from two Romano-British glass-working sites. *Archeometry '90* (E Pernicka and G A Wagner, eds) Basel: Birkhauser Verlag, 295-305.

Mirti P., Casoli A. and Appolonia L. (1993) Scientific analysis of Roman glass from *Augusta Pretoria*, *Archeometry* 35, pp 225-240.

Verità, M. (1995) Analytical investigation of European enamelled beakers of the 13th and 14th centuries. *J. Glass Studies* 37, 83-98.

Wedepohl K H (1993) Herstellung mittelalterlicher und antiker Glaser. *Abh. Akad. Wissenschaften Lit.f Mainz*.

Wedepohl K H, Krueger I and Hartmann G (1995) Medieval lead glass from northwestern Europe. *J Glass Studies* 37, 65-82.

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and

Ian Freestone
Dept. of Scientific
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British Museum

A Survey of Medieval Glass Vessels in England

This year saw the completion of my thesis for Durham University on glass vessels of AD1200 to 1500. Over 1200 vessels were catalogued from more than 200 sites across England. They included table and utilitarian vessels of soda, potash and lead glass, manufactured in England, Europe and the eastern Mediterranean. The sites included high-status castles, manors and palaces; monastic and other ecclesiastical sites; and affluent urban residences. Surprisingly, no glass was found to have been used on less wealthy sites.

Other issues explored included the social situations in which the glass may have been used, such as the probable change from the communal to the individual use of drinking vessels. Other changes included the dominance of tablewares in the 13th to 14th centuries, to that of utilitarian wares by the 15th century. It is planned that the research will be published as a *Handbook of Medieval Glass Vessels* in due course.

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Public Collections of Glass Abroad: some recent catalogues, Part II

In this sequel to my survey (published in the first issue of *Glass News*, Spring 1996), the reader's attention is first drawn to a useful, but easily missed, Portuguese publication from the National Museum of Archaeology in Lisbon, which was produced in 1995 by Professor Jorge de Alarçao and others to accompany the exhibition, *Subterranean Lisbon*. This catalogue includes a wide range of materials and the excavated glass belongs to many centuries; these include, two drinking glasses (no.336) which are associated with a set belonging to the Albuquerque family during the Late Renaissance, although their form might suggest a later date.

Even more likely to be missed is the handsomely illustrated 1996 Catalogue of the Venetian Glass Museum in Hakone, Japan, because it is entirely written in Japanese (apart from the title, *Hakone Glass Forest*). Interestingly, this young collection contains some well-known pieces, such as the blue-glass goblet and cover (with its enamelled and unusually lavish gilt decoration) that had first been recorded in 1891 in the collection of the controversial dealer/collector, Frédéric Spitzer of Paris. It was seen in London in 1978 at the Royal Academy of Arts just prior to the sale of the Robert von Hirsch Collection (Sotheby Parke Bernet, 22 June, 1978, lot 257, where its height was stated to be 32.5cms and it was attributed to a Venetian workshop "circa 1500").

Turning now to one of the older and more historic collections of glass in Europe – and certainly one of the most important – the Danish publication, *Royal Glass*, has provided an excellent catalogue of 411 items (ranging in date from 1568-1980) that (for a variety of reasons) had entered the possession of the Danish Royal House. The book is far more than a simple catalogue because it also comprises thirteen authoritative essays (richly documented and illustrated); nine are written by Danish specialists and four have been contributed by scholars working in Dresden, Oslo, Paris and Prague. This beautifully produced volume has a parallel text in Danish and English throughout. In addition to the well-known pieces made at Nostetangen (Norway) – a factory built in the early 1740s and patronised by the Danish King and his Court in Copenhagen – there are numerous glasses of German, Bohemian and Silesian origin, many of which are of outstanding significance for the history of wheel-engraved decoration. Although there are a handful of Netherlandish and English glasses, it is the hitherto unknown group of eighteen Gallé vases together with the accompanying display-cabinet signed by Gallé, that has caused the greatest excitement. They were presented by the French Republic in 1907 and each piece has been skilfully photographed in colour – and, having seen those lent to the exhibition at Corning this year (June-October), I would add that they could hardly be reproduced more faithfully. Another surprise in this book has been provided by the two essays devoted to the purchasing expeditions and the network established for maintaining the quality of the

wines, beer and spirits consumed at the Danish Court over a period of nearly 500 years.

Among the German museums, which have in 1995 made known their collections of glass by publishing well-illustrated catalogues, are two important institutions: the Rheinischen Landesmuseums Trier, and the Glasmuseum of Passau. The Trier Catalogue by Peter Seewaldt is arranged chronologically and consists mainly of German or Bohemian glass, much of it engraved (especially with ceremonial devices). Although there are some interesting undecorated German vessels of the 17th century, it is interesting to note that only 13 entries (cat nos 231-243) contain items dated later than 1800. However, a glass such as the silvered specimen (cat no 19) is rightly suspected of being a 19th-century creation and should not be overlooked by those studying the later period.

The Passau Glasmuseum has produced seven volumes (in soft covers), written by a large team of specialists and generously illustrated. This splendid work of reference will be essential for all those interested in Bohemian and German glass production from the 17th century to the modern times. Of particular value is the seventh volume, with its maps and indices, detailing the glass factories situated in Bohemia, Bavaria and Silesia. The editor, Georg Höltl, deserves to be congratulated.

Hugh Tait, British Museum

The publications

Lisbon. Museu Nacional de Arqueologia

Subterranean Lisbon. Text: Jorge de Alarçao and others. Lisboa '94; Milan: Electa, 1994. 278pp

Hakone Ukaimuseum (Venetian Glass Museum).

Hakone Glass Forest Hakone, Japan, 1996, 134pp.

Copenhagen. Christiansborg Slot (Christiansborg Palace).

Kongelige Glas: Udstilling af drikkeglas, glasservicer og pokaler gennem 400 år (Royal Glass: An Exhibition of Four Centuries of Table Glass, Glass Services, and Goblets). Michael Bloch et al. Kobenhaven: Christiansborg Slot, 1995, 397pp.

Rheinischen Landesmuseums Trier

Glas des 17. bis 19. Jahrhunderts: Bestandskatalog des Rheinischen Landesmuseum Trier. by Peter Seewaldt, Trier, 1995, 214pp (Schriftenreihe des Rheinischen Landesmuseums Trier; 8).

Passau. Passauer Glasmuseum

Das Böhmisches Glas 1700-1950, Georg Höltl (ed). Passau, 1995,
Band I: Barock, Rokoko, Klassizismus. 112pp
Band II: Empire, Biedermeier, Zweites Rokoko, 224pp
Band III: Historismus, 226pp
Band IV: Jugendstil in Böhmen, 312pp
Band V: Jugendstil in Bayern und Schlesien, 86pp
Band VI: Art Deco, Moderne, 138pp
Band VII: Karten und Register, 92pp

Books and Papers

The Toledo Museum of Art. Roman Mould-Blown glass: The first through sixth centuries,

by E.M. Stern

("L'Erma" di Bretschneider in association with the Toledo Museum of Art, 1995), 388pp.

This, the second catalogue of the extensive ancient glass collection of the Toledo Museum of Art, will be welcomed by all students of glass. Every piece is illustrated by one or more black-and-white photographs, a representative sample is drawn as well, and the finest examples are also shown in colour. The individual catalogue entries are detailed and informative. Some may disagree with the ordering of the catalogue and the different groups proposed, but generally similar pieces are kept together. The whole is prefaced by an introduction devoted principally to technology which, though not entirely convincing, does collect together information about moulds in antiquity and later. We have to thank the staff in the Toledo Museum's publications office for chapter 4 (the 4th to early 7th centuries) who composed it partly from a draft manuscript by the author, though this is only apparent from a footnote.

Veronica Tatton-Brown, British Museum

The new annual catalogue (no 7) is now available from Paul Brown at **The Glass Bookshop**, 68 St James Street, Brighton, East Sussex BN2 1PJ (tel 01273 691253). It contains listings for 586 titles which cover the entire range of subjects related to the study and collecting of glass, including auction catalogues, trade and production catalogues, science and technology, paperweights and stained/painted glass.

Glass, Tools and Tyzacks

by Donald Tyzack

280pp, 48 figs.

A new book about the craftsmen who originated in Lorraine and made window glass from 1400 to 1700. It describes their special position in feudal society, how they lived and the conditions of life. Their religious beliefs fundamentally influenced the conditions of their existence. All this is strung together by following the Tyzack family from generation to generation. By 1600 they had moved from Lorraine to England bringing glassworking skills from the forests of Lorraine to the English forests. After 1700 window glass as a means of livelihood gave way to Tools and the remainder of the story traces the story of tools such as the saw used in the furniture industry and the scythe. The stories of most early Tyzack tool companies are told, intertwined with an outline of the social conditions at the time.

Copies are available from the author, Donald Tyzack, at 14 Meadowcraft, Gerrards Cross, Buckinghamshire, SL9 9D. Price £9.99 plus £1.50 p&p;

AML Report Summaries

Twice a year the Ancient Monuments Laboratory (AML) produces a list, with summaries, of all new additions to its Reports Series. Most reports are pieces of work that will eventually appear, at least in summary form, in archaeological excavation reports. Because of the delays that often occur before full publication and the summary publication of some scientific reports, it was decided to make the full information in AML reports available as soon as possible. The reports cover a wide range of work in archaeological sciences and conservation undertaken by AML staff and contractors and thus includes occasional reports on glassworking or the chemical analysis or conservation of glass. Institutions and individuals may ask to be put on the mailing list to receive the lists of report summaries which are free. You may also request copies of individual reports; small numbers are available free though charges may be made for large numbers.

Write to:

Ancient Monuments Laboratory
English Heritage
23 Savile Row, London W1X 1AB.

REGISTRATION NUMBERS – 1908-45

The Glass Association has recently published a list of all the registration numbers relating to the manufacture of glass which were issued between 1908 and 1945. This complements Jenny Thompson's 'The Identification of English Pressed Glass 1842-1908'. The list is A4 size, extends to 24 pages and gives the name of the company applying for the registration as well as the number and date. It can be obtained at a cost of £5.50 inclusive of post and packing from

The Glass Association
Broadfield House Glass Museum
Compton Drive
KINGSWINFORD
West Midlands DY6 9NS

Cheques should be made payable to Dudley M.B.C

...NOTA BENE

'Die Hohlglasfunde' by A Soffner
in M Untermann (ed) *Die Latrine des Augustinereremiten-Klosters in Freiburg im Breisgau*. Materialhefte zur Archäologie in Baden-Württemberg, 31, 1995.

There are few structures which excite the archaeological finds and environmental specialists more than a large and well-used cesspit. Leaving aside the more obvious 'waste' material, such features tend to become dumping grounds for all manner of household rubbish – pottery, wood, metal, textile and glass. This report is about one such large assemblage and the catalogue on the glass alone contains 230 fragmentary vessels dating from the 13th to 16th centuries.

Recycling a late medieval glass furnace

The following item was reported in a recent issue of 'Rescue News'

The retrieval of a medieval-type glassmaking furnace by a Surrey conservation firm continues a link between Staffordshire and Surrey that can be traced for at least 600 years. It is thought that the major centre in England for medieval glassmaking was in the Sussex/Surrey Weald, where large quantities of timber were available. In Staffordshire a similar situation existed and a considerable number of glass manufacturing sites have been discovered there.

Medieval records show that there was a link between the two areas. In 1379, Joan Glasewryth of Staffordshire was asked by Margaret Schurterre, the widow of a well-known glassmaker of Chiddingfold in Surrey, to manage her glasshouse. In later centuries glassmakers from the south who had originally come from Lorraine and Brittany also moved to Staffordshire to work there. Glass was collected throughout the county for recycling and excavated sites usually show quantities of broken fragments – cullet – used and melted with the fresh raw glass made on site.

A northern European medieval-type 'forest glass house' dating to 1540 was excavated in a large quarry in Cannock Chase near Rugeley, Staffordshire and taken 20 miles to the glass museum at Kingswinford, west Midlands. Very few medieval glass furnaces are on view to the public and it is planned that this example, retrieved partly with the aid of a small grant from the Science Museum's PRISM fund, will be ready for display in 1997.

The highly fragile structure was removed using existing but improved techniques, protected and boxed with wood and a lightweight but tough polyurethane foam, with a raft of hollow steel rectangular sections carefully inserted to form a rigid base. Strong steel girders were then placed underneath and bolted to the raft. The latter was then joined to the rigid 'foamed box' containing the glass furnace by placing strong steel tape through the steel tubes and around the top and sides.

This is the largest archaeological structure to be removed using this technique. The design of the 2 ton steel raft supporting the 15 ton structure was checked by computer analysis undertaken by the Farnham firm of Massingale and Phillips, and the site work was designed and completed by Conservation Services, specialists in retrieving ancient structures. Quarry operators, Western Aggregates, gave substantial technical support.

John Price
Conservation Services
Farnham
Surrey

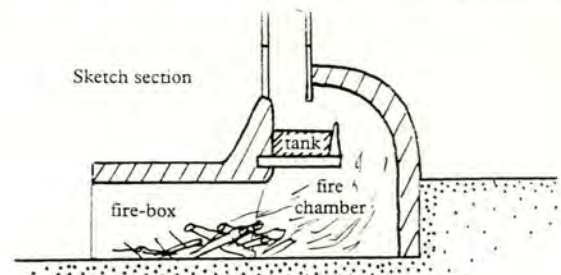


Reconstructing a Roman furnace

In August 1995, John Shepherd (archaeologist), Gilbert Burroughes (farmer and potter) and Ed Iglehart (glass-worker) were brought together by Channel 4's *Time Team* to try to recreate a Roman glass furnace. With only a few days preparation, we built a small furnace and successfully melted a small amount of Roman glass – small, undiagnostic body fragments from the 50kg cullet dump at Guildhall Yard, London – and Ed was able to blow something vaguely resembling a glass vessel. We were all content with the result – but we knew that we could do better because we had cut a number of corners for this experiment.

To ensure success we kept a bellows handy – and we used it regularly. This helped us to reach a maximum temperature above the crucible of 1260°C. We also used a modern crucible which conflicts with the fact that, for London at least, we have no Roman crucibles. In addition, we encountered a few 'technical' problems, the most serious of which was that the local clay we used to build the furnace had a low melting point. As the temperature rose above 1000°C, part of the furnace collapsed. It did, however, produce some very fine fuel-ash slag. Cheats and problems aside, one very important observation was that, without a chimney attached to the back of the furnace we would never have gone above 700°C.

Last Summer, Gilbert and I built another furnace on his farm near Chediston in Suffolk which reproduced more faithfully, we believe, the archaeological evidence for Roman furnaces as found on 2nd-century sites in London – small, keyhole-shaped structures with suspended tanks. Traces of partially fired clay around the edges of a Roman brick, used as the base of such a tank on a site near Moorgate, indicated that it had been built into just half of the circumference of the round wall above the fire-chamber. To replicate this, we made a similar 'brick' from Chediston clay, 30x30x3cm, in an electric kiln beforehand. The sketch section shows the position of



this brick in relation to the other elements of the furnace. A small wall of clay was attached to the top of this tile on the open side and connected with the main walls of the chamber. This small wall, scarcely 3cm thick, was the weakest part of the structure, being both flimsy and very close to the main zone of combustion in the furnace.

Note that both the tank and the chimney were positioned at the front of the main chamber allowing (continued on page 8)

Current and future exhibitions :- Manchester, Broadfield House, Corning, Blois, Philadelphia

Following the success of the **Whitefriars** exhibition, the Manchester City Art Galleries continues its series of ground-breaking glass exhibitions with the display of over 150 examples of modern Finnish art glass. **Finnish Post-War Glass 1945-1996** draws on some of the finest collections in Finland to illustrate why Finnish glassmakers are renowned for their skill and creativity. The exhibition is on until 31 March 1997. Entry is free. The Galleries are also inviting visitors to take a fresh look at the city's rich permanent collections of ceramics, glass and metalwork in a lively new display at the Mosley Street building called **A New Look at Decorative Arts**. It highlights many of the striking new 20th-century acquisitions made by the Manchester Galleries over the last decade. There is no closing date for the display.

Broadfield House Glass Museum, Kingswinford, is holding an exhibition made up from the collections of the Museum's Friends. The result brings together historic and studio glass from around the world, from a Roman jug to contemporary sculpture. The exhibition, **Friends and Favourites**, runs until 5 January 1997. Admission free. From 18 January until 6 April 1997, the Museum will be holding an exhibition of some of the finest examples of Victorian engraving. **Battles and Beasties: Masterpieces of Victoria Engraving**, will bring together two dozen outstanding pieces from both the museum's collection and private collections. It will include the magnificent magnum claret jug engraved by Kny with a picture of Queen Boudicea at the head of her army. This is a 1996 acquisition, purchased by the Museum with the help of grants from the V&A, the National Arts Collection Fund and their own Friends of Broadfield House and it will be the first time that it has been on public display. Admission will be free.

The Corning Museum of Glass will be the sole venue of an exhibition on **Italian Glass, 1930-1970 - Masterpieces of Design from Murano and Milan**. This presents more than 200 examples from the Steinberg Foundation collection in Liechtenstein and has been organised by the Kunstmuseum Dusseldorf. Although the survey extends across four decades, there will be a special emphasis on the 1950s and the work of the foremost Italian glass producer of that period: Venini & Co. The exhibition runs from 19 April to 26 October 1997 and is accompanied by a 280-page volume, in English, with 250 full-colour illustrations, co-authored by Eva Schmitt and Dr Helmut Ricke. For details of the exhibition, the book and a symposium on Italian glass, see **Conference time** below.

Anyone passing through the Loire valley this winter might want to drop into Blois to see a fine examples of Gallo-Roman glassware. The exhibition, **Verreries gallo-romaines: trésor du quotidien**, draws upon collections in the region and can be found in the Musée des Beaux-Arts, Chateau de Blois, until 2 May 1997.

The University of Pennsylvania Museum in Philadelphia is in the course of organising an exhibition, due to open in the Autumn of 1997, which is to address how Roman glass, in its mass production and its use in the mimicry of luxury items, held a relatively lowly position in the hierarchy of Roman materialism. **Roman Glass: Reflections on Cultural Change** will feature over 200 glass vessels dating from the late 2nd century BC to the early 7th century AD from the University's large Hellenistic and Roman collections. Only a handful have ever been publicly displayed or published.

For more details, contact Marygrace Gilmore, Museum's Development Office, (215) 898-4026, or see their web-site at: <http://masca.museum.upenn.edu/>

Conference time: Corning and Cincinnati

The Corning Museum of Glass will be holding a symposium in conjunction with the exhibition noted above. **Italian Glass, 1930-1970, "A Symposium on Design, Art, and Craft"** – the first of its kind in the United States on mid-20th-century Italian glass design – will feature talks by Rosa Barovier Mentasti, Anna Venini Diaz de Santillana, Marc Heiremans, Susanne Frantz, Helmut Ricke and demonstrations by one of the worlds most celebrated glassmakers, Lino Tagliapietra. Preregistration fees cost \$150 to members of the Corning Museum, \$175 to non-members, and \$90 for full-time students. Registration at the door on 30 May costs \$190. For more information about the symposium programme and reduced rate accomodation, contact

The Corning Museum of Glass
One Museum Way
Corning, New York 14830-2253
Fax:(607)974-8797

or their WWW site at <http://www.pennynet.org/glmuseum>

Details should shortly be published for a symposium called **The Prehistory and History of Glass and Glassmaking Technology** to be held in Cincinnati, Ohio on 4-7 May 1997 as part of the 99th Annual Meeting of the American Ceramic Society. Topics and issues to be discussed will include: the uses and performance of glass at different times and places; the social organisation of glass production; the nature of innovation in glassmaking technology; cross-craft interaction between glassmakers and other industries and how glassmaking skills are acquired. For further information contact

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Forthcoming AHG events

The Association for the History of Glass will be holding a one-day conference on Monday 12 May, 1997 in London devoted to recent work on Roman glass studies. This will include experimental work, such as the work on furnaces, carried out by John Shepherd and Gilbert Burroughes, and new approaches to the quantification of fragmentary glass assemblages, applicable to all periods, by Hilary Cool and Mariana Perez-Sala. Mould-blown sports cups now figure strongly in the repertoire of Mark Taylor and David Hill and they will be joining Jenny Price to discuss this well-known series of vessels. Full details will be circulated to subscribers of *Glass News* in the New year.

For those of you who may have been expecting an article on the AHG technical session at Wolverhampton, advertised in the last issue of *Glass News*, sadly we must report that it had to be cancelled at short notice. However we intend to arrange a series of day sessions on cold-working techniques for 1997 extending, possibly, into 1998. Further details will be published in our next issue of *Glass News*.

(continued from page 6)

the heat from the fire chamber to deflect off the rear wall and the roof of the furnace down onto the surface of the glass in the tank (in this experiment, some mid-1990s wine bottles, conveniently close to hand, were used). The results were more than we expected. Without bellows we achieved a maximum temperature of $\approx 1150^{\circ}\text{C}$ above the tank. The lack of good, bone dry fuel prevented us from increasing the temperature and so, after ten hours, when we suspended the experiment, the glass had begun to melt but was not in a state to work. The entire furnace, however, had remained intact including the narrow wall across the front of the base of the tank.

Once again this single, simple experiment helped us to understand a little more about how, using the evidence in the archaeological record, a furnace in Roman London would have looked and worked. The next step will be to build another furnace under even more controlled conditions, to measure and record its efficiency – and, perhaps, blow some glass.

John Shepherd

News in brief

In this issue – we highlight just a few of the glass sites on the World Wide Web

In the last issue of *Glass News*, Cath Mortimer wrote about her current research work on Anglo-Saxon beads. She has put an example of one of her SEM samples, a bead from Grave 845 at Mucking, Essex on the English Heritage site at: <http://www.eng-h.gov.uk/SEM/july.html>

The Corning Museum of Glass has a detailed site which is well worth regular visits. It gives information about the Museum's events and programmes, a 'Curator's' selection of glass objects and vessels, and much else. Of particular interest is their on-line glossary of glassmaking terms and a 'Resource For Glass'. Both contain information collected in response to the most often asked questions by students and their teachers and they cover glass and the glass industry, both old and new. Also, look out for details of The Studio, a new teaching facility, run by Amy Schwarz and Bill Gudenrath. <http://www.pennynet.org/glmuseum>

Colin and Sue Brain have put together a very interesting group of pages on their site. Subtitled 'Pioneering English Drinking Glass 1615-1714', it examines not just the glass but technological changes and the types of drink available during that period. They are regularly updating and enlarging their site which now includes classifications, in the style of Barrington-Haynes, of vessels with plain and ribbed hollow knob stems and late 17th-century tapered stem glasses. They are looking for feedback so contact them after visiting their site. <http://www.interalpha.net/customer/cbrain/>

Answer on a postcard, please

From Bill Bryson's 'Notes from a Small Island' (Doubleday 1995), p83

"Among the many thousands of things that I have never been able to understand, one in particular stands out. That is the question of who was the first person who stood by a pile of sand and said, 'You know, I bet if we took some of this and mixed it with a little potash and heated it, we could make a material that would be solid and yet transparent. We could call it glass.' Call me obtuse, but you could stand me on a beach till the end of time and never would it occur to me to try to make it into windows."

REMEMBER

Glass News exists for you to inform as well as be informed.

Tell us all about your news, ideas and discoveries

New finds • New research • New publications • New ideas

Send your contributions before 1 March to:

John Shepherd, Editor *Glass News*, Museum of London, London Wall, London EC2Y 5HN

Tel: 0171 600 3699 • Fax: 0171 600 1058 • e-mail: jshepherd@netmatters.co.uk

Comments expressed in the newsletter are not necessarily the views of the AHG.