

# Glass News

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## First – a question...

I wonder whether any readers of *Glass News* might be able to help me? I am researching the Scottish glass industry 1610-1750 and have recently come across two documents which include the term 'shappie' and 'schappie' glass. They date from 1687 and concern English glassmakers who had been working in Ireland. One reference is to 'toys in shappie glass' which required 'Litteridge De Lore', white arsenic, yellow arsenic and flower of brimstone. The second was an agreement to make 'handles for swords and knives...also all sorts of whyte and schappie work'.

So – what is 'shappie glass'? And does anyone know of any glass sword handles?

Jill Turnbull

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(illustrations by Michael Bayley)

## Cristallo and the Lorraine Glassmakers

Around 1492, the Lorraine glassmaker François de Thysac examined the market for his glass. He realised that the rich families of France bought glass made in Murano in Venice which were made of a fine material called *cristallo*. This could be made thinly and had a brilliance and clarity that was superior to the glass vessels made in François's Vôge. He decided to exchange his know-how for that of Murano so he quit the Vôge in 1492 and asked to be allowed to practise in Venice. He worked there with a Muranese named George Ballarino. François taught George the mysteries of the Lorraine methods and in exchange learned those of Murano. But, by doing this, François betrayed his vow, breaking the oath sworn by all young men of the four glassmaking families when introduced to the secrets of the art.

When François returned to Lorraine, the Duke was tickled pink with the new products. He granted him a new glasshouse, called La Frizon, but François was totally shunned by his kinsmen and was never able to get anyone of his family to work with him again. Here, then, is a translation of the award by the Duke to François de Thysac.

(see Levi, C.A., *L'arte del vetro in Murano nel Rinascimento e I Berroviero*, Venice, 1895)

CREATION AU PROFIT DE FRANÇOIS DE THYSAC  
DU SITE DE LA FRIZON, 18 OCTOBER 1505

(AD Meurthe-et-Moselle, B 643, acte n° 14, copie collationnée à l'original)

René by grace of god King of Jerusalem and of Sicily Duke of Lorraine and of Bar Marquis of Pont, County of Provence of Vaudemont of Aubmalle and of Guise and it is all those that these present letters truthfully salute.

Humble supplication of our dear and good friend Francoys de Tizal glassmaker native of our Big Glassworks, close to our City of Darney, did obtain and heard things that some time ago encouraged him to leave our grace from here and withdraw himself to Venice where he learned the art and mastery of making in truth the crystalline and other small work that one makes in that place. He makes now that which their masters enjoy. He has taken advantage of returning to meet masters and workers here because of the special affection and natural love that he has of living and spending his days in his place of birth and nourishment.

So not long ago he wished to get back and make his continual residence and living thereafter in the aforesaid Big Glassworks, there to erect and construct.

This is all one new glasswork, a whole house and dwelling for his family people and servants of him to stay in, so it is our pleasure to favour his wish. Giving and assigning an appropriate place in order there to make afterwards in the aforesaid big glassworks work of vitality and work in his aforesaid art and mastery of glassmaking, for him, his heirs, and assignees. For this reason he gets such privileges prerogatives exemptions and liberties that the other glassmakers and the glass-makers of nearby our aforesaid City of Darney have and

continued on page 8

## Current Research on the History of Glass through Scientific Analysis 29th March 1999

The following short texts are based upon the original abstracts, submitted some time in advance, of the papers presented at the Association's successful one day conference held in London in March. One or two speakers had done further work in the interim and so they modified the content of their talks for the day itself. The addresses of the participants are given here to enable readers to make further enquiries.

### Abstracts

**Ian C Freestone, Michael J Hughes and Colleen P Stapleton: Compositional Studies of Some Saxon Glass**  
(Department of Scientific Research, British Museum, London WC1B 3DG)

Anglo-Saxon vessel glass from south-eastern Britain, and window glass from the monastery at Jarrow, Northumbria, have been analysed for major and trace elements, by energy dispersive X-ray analysis in the scanning electron microscope and inductively-coupled plasma mass spectrometry. Several compositional groups may be recognised. 5th/6th-century claw beakers and cone beakers are typically of the low-magnesia, low-potash 'natron' type of glass. The 6th/7th-century globular beakers and palm cups, however, are more typically high-magnesia, high-potash type glass. The Jarrow windows are typically of the natron-type but have high impurity levels of colorant elements, even though the glass analysed was selected as pale green and apparently not intentionally coloured.

The implications of the results for the production and supply of glass material in the post-Roman period were discussed, in the context of three models: (1) recycling of old Roman glass, (2) continued supply of primary 'raw' glass from the East, (3) local (regional) manufacture of glass from its raw materials. The emerging database of composition of primary glass from the Near East is invaluable in this respect, allowing direct compositional comparisons as well as informing the interpretation of data, in terms of likely source variability and the effects of contamination.

**Justine Bayley: Bead making in Viking York**

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

Excavations by York Archaeological Trust on two sites in the centre of York have produced evidence for the manufacture of glass beads, mainly from 10th and 11th-century contexts. Two types of glass were being worked, blue soda glass, and high-lead glass that was mainly dark green or black. The blue glass appears to be re-used Roman scrap; small quantities were melted on rough discs cut from domestic ceramics, scraped off and wound into beads. These ceramic discs, complete and mis-formed beads, and drawn out glass trails are among the finds. All the blue glass has a very similar composition.

The evidence for high-lead glass working is less complete. There are numerous crucible fragments containing high-lead glass, as well as beads and slick stones made from glass of this type. The minor elements in the glass suggest that neither the analysed beads nor the slick stones were produced from the glass melted in the crucibles. Further analyses of contemporary lead-rich finds from the site are planned and it is hoped that the results will help illuminate the nature of this glass industry and its raw materials.

**Paula Mills: The composition of ecclesiastical window glass from 14th to 16th-century Britain**

(Victoria and Albert Museum, South Kensington, London SW7 2RL)

The composition of window glass is often assumed to have remained constant but changes in technology did occur. This paper will look at the remarkable change in the composition of window glass that occurred between 1350 and 1500.

Common window glass types are Roman 'soda' glass, medieval 'potash' glass and then 'later' mixed-alkali glasses. The glazing schemes at York Minster, St Mary's, Fairford and All Saints, Checkley were used to illustrate the compositional changes, and comments were made on the properties of these glasses. The date, present location and colour of the windows were related to the glass compositional groups.

The compositions of the glass was determined by scanning electron microscopy with energy dispersive X-ray analysis. In addition to standard methods of categorising medieval window glass based upon soda, potash, lime and silica contents, the magnesia content was found to be very informative.

**Julian Henderson and Matthew Ponting: Aspects of glass technology from Frattesina, Italy**

(Department of Archaeology, University of Nottingham, University Park, Nottingham NG7 2RD)

The chemical analyses, using electron microprobe, of over 100 glasses from the Late Bronze Age-Early Iron Age site of Frattesina, northern Italy has provided evidence for some unusual glass compositions. Frattesina was an entrepôt at the head of the Adriatic; the context of possible industrial innovation were considered.

Fragments of raw glass, glass beads, glass vessel fragments and glass adhering to crucibles have been sampled and analysed. This paper discussed the range of compositions in relation to other ancient glasses and where they might fit the development of ancient glass technology in a world context. The colorants used were also discussed.

**Caroline M Jackson and James W Smedley\*: Raw materials and glass recipes – glassmaking in Staffordshire in the 14th to 16th centuries**

(Department of Archaeology, University of Sheffield, Northgate House, West Street, Sheffield S1 4ET)

\* Department of Engineering Materials, University of Sheffield, Sir Robert Hadfield Building, Mappin Street, Sheffield S1 3JD)

The site at Little Birches, Staffordshire was excavated between 1991-92 by Chris Welch for Staffordshire County Council. The excavation uncovered four glass furnaces and associated waste, representing two phases of glass manufacture which were dated to the 14th and 16th centuries respectively.

Glass manufacture in Britain, and indeed throughout Northern Europe at this time, produced the so-called 'forest glasses', which are manufactured using silica and an alkali derived from woodland trees and plants. It has often been

suggested that beech was an excellent choice of woodash for glass production, and it is mentioned by the monk Theophilus much earlier for 12th century glass production in Germany. Yet, documentary evidence and vegetation history suggest that beech was not the main source of the alkali for either episode of glass manufacture at Little Birches, but that bracken ash was the primary glass modifier.

The paper assessed the excavated and analytical evidence for glass production at Little Birches published by Welch (1997) and Mortimer (1997). Using experimental data from replicate glasses, the advantages and limitations of using such an alkali are explored and the nature of the finished product from the glass melting experiments is compared to the excavated glass. This throws further light upon the logistics of glass manufacture and the choice of raw materials for post-medieval glass manufacture in central Britain.

### **David Crossley: Fragments from the field – aspects of sampling of glassworking residues**

(Division of Continuing Education, University of Sheffield, 196-8 West Street, Sheffield S1 4ET)

Residues from glass furnace sites provide analytical evidence for working practices, complementing early written records. There are, however, biases in the survival of the materials found during excavation and field-walking, due both to contemporary re-cycling and to subsequent degradation. Glass fragments found on site may represent only the final stage of use of a furnace, earlier material having been re-used. Further, glass may have been discarded on qualitative grounds, although whether the defects which have since given rise to weathered surfaces could have been detected by the glass maker is hard to determine. Comparable reservations apply to refractories: surviving fragments may over-represent crucibles made of poor-quality clay, fracturing in use. There are frequently quantities of materials resembling solidified foam, considered to be material spilled or ladled from the tops of crucibles during the melt. Examination of this process-waste has been found to be worthwhile. Certain materials rarely survive: the identification of frit is difficult, making it hard to determine whether a fritting stage was used. Sand deposits are rarely found, being easily dispersed, if not salvaged; similarly, the survival of identifiable alkali stocks is most unlikely. These materials have more chance of being characterised, if often only approximately, from examination of the glass and process waste. Excavators are often faced with large quantities of refractories, glass fragments and waste. Suggestions were made for sampling on a realistic scale.

### **Ine De Raedt, Koen Janssens, J Veeckman\* and F Adams: Compositional categories found among façon-de-Venise and Venetian glass vessels from Antwerp and other cities in the Low Countries**

(Department of Chemistry, University of Antwerp, Universiteitsplein 1, B-2610 Wilrijk, Belgium)

\* Excavation Department of the City of Antwerp, Godefriduskaai 36, B-2000 Antwerp, Belgium)

At the beginning of the 16th century, Antwerp was one of the most important ports in Europe. Among the archaeological finds that are dated to this period of great wealth, an important number of fragments of luxurious glass vessels have been found. In view of the high price of finished Venetian glassware, it is unlikely that all the Antwerp glass finds are Venetian products. The aim of this investigation was to determine whether there was a significant local production of 'façon-de-Venise' glass vessels in Antwerp in the 16th and 17th century and to elucidate how this local production can be distinguished from 'real' (ie imported) Venetian ware.

A representative set of about hundred glass vessels from different excavation sites in the centre of Antwerp was selected for major element analysis by EPXMA (electron probe X-ray microanalysis). Clustering of the Antwerp data revealed five compositional groups. Two groups of glass objects were found that feature a typical Venetian composition, one with a 'cristallo'-like composition and the other closely resembling 'vitrum blanchum' glass. The other three compositional groups contain glasses that probably were fabricated locally. The composition of a waste glass marble coincides with one of these groups. The differences between these three groups may indicate that different types of alkali were in use or possibly mixing of alkali types by the glass workers. The same non-Venetian composition was found in London, Amsterdam and various locations in France, which may be explained by the export of locally manufactured 'façon-de-Venise' glass vessels from Antwerp to these nearby cities or by the use of similar fluxes/flux mixtures to those in Antwerp.

In a second phase these objects were also analysed for their trace element content by means of SR-XRF (synchrotron radiation induced X-ray fluorescence analysis). Next to elemental analysis at the trace level, microscopic synchrotron beam techniques were also employed for oxidation state specific investigations of historical glass.

### **Thilo Rehren: Roman Glassmaking at the Hambacher Forst?**

(Institut für Archäometallurgie, Deutsches-Bergbau Museum, Am Bergbaumuseum 28, D-44791 Bochum, Germany)

One of the still unsolved fundamental questions in Roman glassmaking is whether it was produced centrally and shipped across the empire as lumps or cullet of raw glass for further working elsewhere, or whether glass was made (and worked) locally at various places, resulting in regional groups of glass compositions. Recent work in Israel (Y Goren and I Freestone) seems to indicate large scale mass production of glass, probably for export, while finds from York (C Jackson *et al*) are in favour of local glassmaking. A discussion of current thought and evidence on this issue will be followed by some theoretical considerations related to the chemical homogeneity of Roman glass in general. Finally, new evidence from the late Roman glass factories in the Hambacher Forst (North-West Germany) will be presented. A combination of research archaeology (W Gaitzsch, Titz), major and trace element analysis of lumps of glass and glass vessels (K-H Wedepohl, Göttingen), and petrographic studies of related ceramic finds (author) is currently being undertaken to tackle this problem. First results were presented and discussed in view of the possibility of local glassmaking.

### **Andrew Shortland: Early Egyptian glass – evidence for trade and tribute**

(Research Laboratory for Archaeology and the History of Art, University of Oxford, 6 Keble Road, Oxford OX1 3JQ)

The first evidence for the controlled use of glass in Egypt comes from 18th Dynasty (c1500 BC), specifically in the production of glass vessels from the reign of Tuthmosis III (1479-1425 BC). The manufacture of these vessels involved coating cores of sand or clay either by dipping them in a crucible of molten glass or by trailing molten glass onto them.

At Amarna, the 18th Dynasty capital of Amenhotep IV, later known as Akhenaten (1353-1337 BC), some of the earliest factories for the manufacture of this have been discovered, indicating that by the Amarna period, glass making was occurring in Egypt.

Glass from Amarna was analysed and compared to existing analyses for earlier glasses from the reign of Tuthmosis III. Examination of major element and trace element compositions enabled the source of the colorants and alkalis of some of the glasses to be identified. From these analyses it can be seen that in Egypt there were two contrasting traditions in the production of glass. One tradition used cobalt colorant from the Kharga Oasis and natron from the Wadi Natrun. These cobalt glasses date from the reign of Tuthmosis III and are common at Amarna. The raw materials indicate that it is likely that this glass was being made in Egypt. A second tradition was manufacturing glass using a plant ash alkali and a copper colorant. This glass is compositionally identical to glass from Nuzi, and was also present in Egypt from the reign of Tuthmosis III and also common at Amarna. The Amarna letters and tomb art indicate that at least some of this latter glass could have been imported from Syria and Mesopotamia in the form of gifts and tributes to the Pharaoh. These gifts may have begun in the reign of Tuthmosis III, but they continued at least through to the Amarna period. Alternatively, some glass of this latter type could have been made in Egypt by foreign workers, following the Mesopotamian tradition. These two traditions continue in parallel at least as long as the Amarna period. It therefore seems probable that glass was being made in Egypt from local materials as early as the reign of Tuthmosis III and that this Egyptian glass was used alongside imported glass throughout the 18th Dynasty.

#### **Paul Nicholson: Experimental replication of glass from Tel el Amarna**

(Department of Archaeology, University of Wales College of Cardiff, PO Box 909, Cardiff CF1 3XU)

The question of whether the ancient Egyptians could actually make their own glass, as opposed to simply work glass imported as ingots or cullet from elsewhere, has become a vexed question since the discovery that glass in Mesopotamia predates that of Egypt.

Recent excavations by the speaker at Tell el-Amarna, Egypt, conducted on behalf of the Egypt Exploration Society, have revealed what is believed to be the oldest glass factory so far known. It has been suggested that two large furnaces unearthed at the site were for the manufacture of glass from its raw materials.

This paper discusses Nicholson and Jackson's building of a full scale replica by one of the excavated furnaces and its use to produce glass using local sand and plant ashes. The experiment successfully demonstrated that furnaces of this size and design could be used to produce glass. The implications of this discovery for Egypt's role in the possible export of glass during the Bronze Age were briefly discussed in the light of the archaeological and experimental evidence from Amarna.

#### **Colin Brain: Using glass luminosity to study 17th century English drinking glass**

(10 College Street, Salisbury, Wilts SP1 3AL)

The analytical study of 17th century English drinking glass presents special problems because it spans the archaeological/historical divide. This poses particular constraints on the choice of analysis methods. The paper discusses how the fluorescence/luminescence properties of glass may be used within these constraints for scientific and historical analysis purposes and contrasts this approach with some more conventional glass analysis techniques. Some of the practical lessons learnt during the development of the prototype instrument are covered before examples are given of its use to analyse fragments from Wells and Port Royal, Jamaica. The paper concluded that the work to date had demonstrated the viability of the technique and outlined its possible long term potential and some of the challenges involved in working towards this vision.

#### **Elizabeth Barham:**

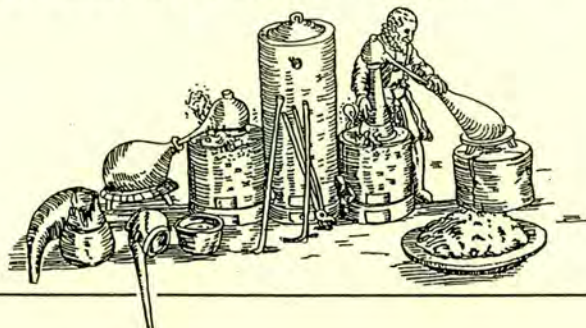
##### **The use of selected chelating agents to reveal the painted decoration on excavated medieval window glass**

(Department of Conservation, Museum of London, London Wall, London EC2Y 5HN)

Decorated window glass was an important medieval art-form and excavated pieces can provide useful information about their archaeological sites. However these pieces are often difficult to examine and record and cannot be displayed to the public because their designs are obscured by a dark background staining of oxidated and hydrated iron and manganese colorant ions in their corrosion crusts.

In this study, three chelating agents: EDTA, DTPA and gluconate, in 5% and 10% aqueous solutions, were tested for removal of the staining, at pHs intended to minimise further damage to the glass through loss of non-staining constituent ions or silica breakdown. EDTA was also tested in conjunction with sodium dithionite. X-ray fluorescence spectrometry and atomic absorption spectrometry were used to detect ion loss from the glass. A method using UV-visible spectrometry to detect whether water washing removes the reagent residues from the glass was investigated.

Results suggest that EDTA and DTPA can remove the staining but loss of remaining non-staining ions can occur and treatments can leave behind a white surface film, that gluconate is ineffective for stain removal under these conditions and that dithionite solutions can be particularly destructive for the glass.



## New books and articles

### Romano-British Glass Vessels: A Handbook

by Jennifer Price and Sally Cottam

A CBA practical handbook in Archaeology no. 14  
ISBN 1872414 96 6 £9.50

As its title suggests, this truly is a practical handbook for the study of Roman glass. This book is aimed mainly at non-specialist archaeologists or curators who require detailed information to catalogue field assemblages or museum collections, although it will also be useful to specialists.

The book is laid out very well, initially offering an introduction to the study of the subject, looking at aspects such as supply, deposition, methods of manufacture and decorative techniques. The second, main section is a comprehensive guide to vessel forms. This section has been simply divided into five clear categories: cups and bowls; jars; jugs; bath flasks and unguent bottles and bottles. This enables the reader to narrow their search for a matching form readily.

Within each description, there is a detailed analysis of the form's characteristics, colours it is generally made in, decoration, distribution pattern, date range, an illustrated example, other similar finds and a section on further reading. It is in this section that the authors link their forms to Isings, *Roman Glass from Dated Finds* which was published in 1957. Although many valuable works have supplemented this essential book since then, Price and Cottam's book is the first to supplant it in forty years. This book is more than an alternative to Isings's volume; for British researchers, I feel it can safely claim to supersede the earlier volume for several reasons: Firstly, by focussing on Romano-British glass, the reader is unlikely to be tempted to assign their fragment to a rare form generally found on the continent. Secondly, the descriptions are more detailed and the line drawings excellent. Perhaps one of the most valuable parts of the book is the date ranges given which take into account many recent excavations. In addition, the examples of the other finds described are useful for citing relevant parallels.

The authors are to be congratulated on producing such a valuable addition to the study of Roman glass.

Sasha Smith  
Museum of London



### The Hamwic Glass by J Hunter and M Heyworth CBA, ISBN 1 872414 87 7 £28.00

The assemblage of Middle-Saxon glass fragments from the settlement at Saxon Hamwic (Southampton) ranks as one of the most important of its period anywhere in Europe. It derives from a time in early Christian England when knowledge of glass production was slowly developing, but when pagan graves – the traditional source of glass material for the archaeologist – are no longer available.

The assemblage is remarkable not only for the range of colours and types of vessel represented, but also for the degree of expertise and technological achievement now evident in post-Roman material. The glass is dominated by vessels of the palm cup/funnel beaker variety and exhibits a range of decorative elements, including applied coloured reticella rods.

Traditionally, archaeological glass has been studied according to typological or art-historical criteria, with more recent trends towards analytical investigation. This volume breaks new ground by taking a total approach to the material by using typological and analytical data in a complementary way. The effect is not only to shed light on glass styles of the era, but also to view the nature and function of the assemblage as a whole and to consider the feasibility of an emerging glass industry in Middle-Saxon times.

### Roman Glass in Britain by Denise Allen

Shire Archaeology Book  
ISBN 07478 0373 0 £4.99

This book has finally filled a glaring gap in this series of popular books and forms an excellent introduction to Roman Glass in Britain for the general interest reader.

The simple layout of the chapters introduces the reader to the origins and history of Roman glass; its decoration, manufacture and trade; a chronological survey of Roman glass vessel forms and windows and objects made of glass as well as a brief guide to museums with considerable collections of Roman glass.

I have to confess to being slightly disappointed with the quality of some of the line drawings and the fact that there are no colour photographs. However, I do recognise that by keeping printing costs low, this book can retail at a very accessible price. Nevertheless, this book offers an informative overview of Roman glass in Britain and is to be recommended as an affordable, quality introduction to this subject.

Sasha Smith  
Museum of London

## Glassmaking sites in Bagot's Park, Staffordshire - Further work carried out in 1998

In October 1998 two ancient glassmaking sites in Staffordshire were investigated by fieldwalking (i.e. the collection of material from the surface of ploughed fields). This continued work carried out in 1997, when one glassmaking site (Site 15) was walked and evidence found suggesting that there had been a furnace and a possible associated domestic site there, all within an enclosing ditch<sup>(1)</sup>. In October 1998, despite less than comfortable weather, students from Keele University's Staffordshire Summer School course walked two further sites. A large amount of glassmaking debris was found (glass, glass waste, glasshouse pot fragments etc.) and much of the material remains to be processed, but it is possible to indicate a number of provisional findings.

An area of 80x60m was walked over Site 12. Little glass was discovered, but there were quantities of lumps of red glass. Some pottery was found and initial inspection might suggest a date in the first half of the 16th century, perhaps making this site contemporary with Site 15 (walked in 1997), but confirmation of this must await specialist examination of the ceramic finds. Site 12 is geographically close to Site 15, and similar red lump glass was found at the latter site, including an amount still adhering to the base of a glasshouse pot.

At Site 11 and area of 100x100m was walked. A large amount of blown glass fragments were recovered, including material from the manufacture both of vessel and window glass, and large numbers of moils. The glass itself was of a hard, blue-green, unweathered type similar to Kenyon's 'late' glass, which he associates with the arrival of immigrant glassmakers in the 1560s<sup>(2)</sup>. The pottery found also suggests a date in the second half of the 16th century or early in the 17th, but this again awaits detailed examination. Nevertheless, the evidence so far found raises the possibility that this site is one operated by the Lorrainer glassmakers of the Henzey family who arrived in the area in the 1580s and worked in Bagot's Park until 1615<sup>(3)</sup>.

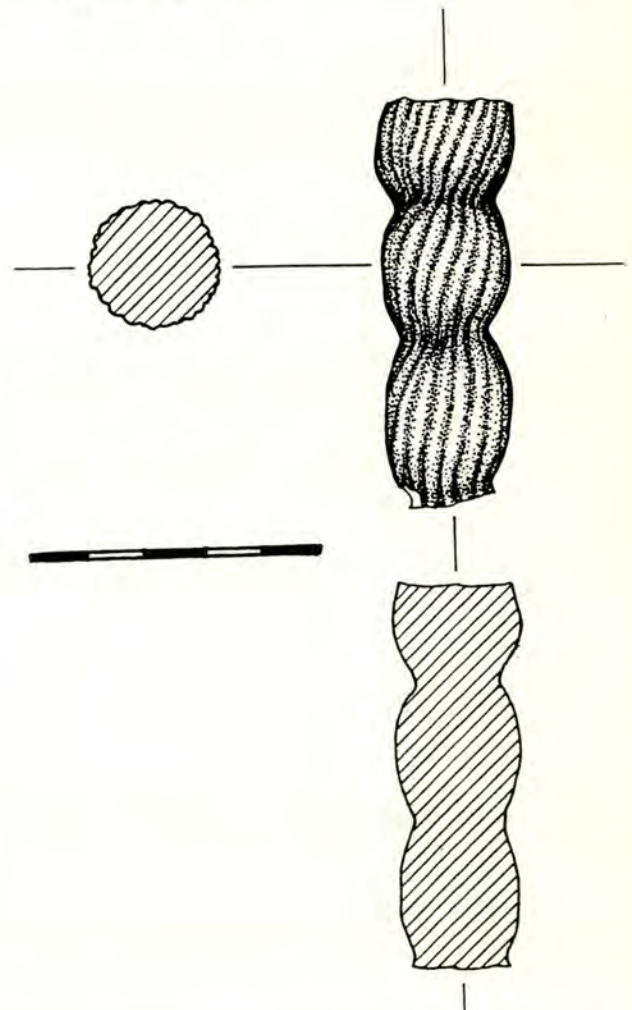
In addition to the fieldwalking, geophysical surveys were carried out with a fluxgate magnetometer over sites 11, 12 and 15 by Dr Ruth Murdie of the Earth Sciences Department of Keele University. At site 11 (the possible 'Lorrainer' site) a furnace site was located, but this was some 40m from the main distribution of glassmaking debris and some associated pottery suggests that this might be of a much earlier date, possibly medieval. The absence of a furnace at the expected location requires an explanation. Site 12 was less puzzling and a very clear trace of a single furnace was found within the distribution of glasshouse debris. The existence of two furnace sites was also confirmed at Site 15, one of which may be surrounded by a rectangular feature roughly 20m long and 12m wide. It is tempting to speculate that this might be connected with the 'glasshouse' structure itself, but if this is indicative of the size of a building then this would have been a substantial structure.

It is intended that a further course incorporating fieldwalking at Bagot's Park be run in late September

1999; anyone interested should contact the Centre for Continuing and Professional Education at Keele University. In the longer term it is hoped that resources may be found to subject the sites so far to archaeomagnetic dating and to carry out specialist investigation of the glass and pottery. In the meantime the figure shows an artefact found during the work on site 11. It is 73mm long, is made of translucent green glass and is one of a number of similar objects found on this site. It was evidently intended to be part of a larger item, suggestions as to what this might have been should be made to the editor.

**Christopher Welch**  
County Archaeological Officer  
Staffordshire County Council

- 1 - *Glass News* 4, Winter 97/98; Welch, C.M. 'Glassmaking Site in Bagot's Park, Staffordshire' *West Midlands Archaeology* 40 (1997) 9-12
- 2 - Kenyon, G.H. *The Glass Industry of the Weald* (Leicester) 1967, 100-102
- 3 - Crossley, D.W. 'Glassmaking in Bagot's Park, Staffordshire, in the Sixteenth Century' *Post-Medieval Archaeology* 1 (1967), 47-48



## Conferences and Exhibitions

### Traditional Glass Furnaces and Glass Production Technology Through the Ages

A Conference dedicated to Theophilus and  
Johannis Kunckel

Moesgaard, Department of Medieval Archaeology,  
Aarhus, Denmark  
11th-14th August 1999

There are still places available for this conference (fee 250 DKR) which will examine the state of knowledge in the study of glass furnaces and glass production technology. Speakers will include Eva Cerná, Reino Liefkes, Jan Kock and Torben Sode.

It is planned for all talks and papers to be published in English in the journal entitled *hikuin* in a special edition concentrating on glass technology. *hikuin* is a well illustrated periodical focusing mainly on medieval archaeology.

During the conference, there will also be an opportunity to visit a couple of the places where glass was produced on Royal request during the Renaissance. Additionally, there will also be an excursion to Rosenholm, a typical Renaissance Manor house, where glass has been excavated from the moat.

If you would like to participate, please contact immediately:-

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E-mail: markjk@moes.hum.aau.dk

### Broadfield House Glass Museum (Kingswinford, West Midlands - 01384 812745)

#### MAJESTY & REBELLION Rare Goblets from the 18th century

3 July - 14 November 1999

An outstanding private collection of rare and unique 17th and 18th century English drinking glasses, which has never before been exhibited in its entirety in the UK. The seventy glasses illustrate the rich pageant of English History, from Queen Anne to George III.

Among the rarities in the collection are two Jacobite Amen glasses, engraved with verses supporting the Old Pretender, as well as other glass commemorating the Jacobite cause.

The collection also contains an important group of enamelled glass by the Beilby family of Newcastle-on-Tyne, including the Buckmaster Goblet and a Royal Armorial Goblet, both from the 1760s.

## COMING SOON

### Dudley Glass Festival

26 September - 3 October 1999

- workshops
- antique glass roadshow
- exhibitions
- guest lectures
- master glassmakers demonstrations and auction

For further information, as it becomes available, please send your name and address to:-

#### Broadfield House Glass Museum

Compton Drive  
Kingswinford  
West Midlands DY6 9NS

### Treasure from the Corning Museum of Glass

An exhibition of Masterpieces from the World's  
Greatest Glass Collection - until July 2000

In this exhibition, the Corning is presenting the best of the best from its encyclopaedic glass collection. It is displaying 200 masterworks, ranging in date from the 15th century B.C. (head of a pharaoh, probably Amenhotep II) to 1997. The objects include furniture, lighting, tableware and sculptures. They illustrate all the major pre-industrial glassmaking techniques: casting, cutting, blowing, pressing, enamelling, engraving, etching, carving and gilding.

Artists and designers represented include: Alvar Aalto, Dale Chihuly, Eric Hilton, Frederick Carder, Fulvio Bianconi, Harvey Littleton, Jiri Hrcuba, Josef Hoffman, Karl Pfohl, Laurence Whistler, Louis Comfort Tiffany, Maurice Marinot, Paolo Venini, Paul J. Stankard, Richard Marquis and Sidney Waugh.

For more information, including future events, contact:-

#### The Corning Museum of Glass

One Corning Way  
Corning, N.Y. 14830-2253  
USA  
Telephone: 607 937-5371  
Fax: 607 937-3352



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have been accustomed to have from ancient time, of which they have from us very humbly implored.

Knowing how we consider and regard the aforesaid same, we have not found any piece of the work shown here, comfortable, beautiful and new for our pleasure. He will make this of grand appearance and make it very well if he settles, with appropriate material which he wants for his own reasons and for the augmentation of our domain.

Also in order to retain him under us and that he could live here and earn his livelihood for his own reasons by our certain science and grace, especially from the considerable advice and deliberation of our officers aforesaid of Darney, the people of our council have given this permit to concede and bestow by this present grant to grant, concede and give to master Francoys de Tizal for him and for his issues that he can and himself may construct, build and maintain all this one new glassworks with the ovens, houses and dwellings there belonging to them and necessary for self to lodge and work at his art and settle in this place and named Under the High Frizon.

Know also there are the remains located and situated there between three former glassworks known as La Grosse Glasswork Brise Verre. So also the aforesaid François de Tizal and his heirs will take in our wood and forests near the aforesaid glassworks in appropriate places and with minimum destruction will be able to take wood and ferns, all other materials and fit and appropriate herbs for his art and mastery of glassmaking.

Besides is to him agreed, conceded and bestowed on him and his aforesaid issues that he can enjoy and wear such privileges, prerogatives, exemptions and liberties that obtain and are the custom for the other glassmakers of seniority, staying in our prefecture of Darney to get.

All in the same form and manner as is conceded and bestowed also on Claude, Didier and Jehan Hennezel, as many glassmakers, with their access when they were given the so-called Le Fay, close to Belrupt.

And at the centre of the things on this declaration, aforesaid François de Tizal and his aforesaid issues will, to our general receiver of Lorraine, for tenure give back and pay henceforth for each year, promptly, the sum of three small florins, ten gros piece money of our Duchy of Lorraine. By two equal terms one portion of a half at Christmas and the other half on the Saint Baptist Jehan following.

All be aware that the said Francoys de Tizal has overcome adversity but is for the present very needy and provided with possessions of this world more tied;

he can construct and build his aforesaid glassworks, ovens, houses and necessary dwellings and we make something pleasing and new for his aforesaid art and mastery. He has of our ample grace; we especially forgo and quit and by this presentation, give and quit the said supposed three small florins until in our good pleasure one can see how he is working.

So given in Mandement by these same presentations and our treasurers and faithful counsellors presidents and people of our accounts of Lorraine at Nancy, Bailiff of Vosge district attorney and receivers, captain mayors and receiver of aforesaid Darney and all other of our officers their lieutenants and each one of the clerks who have it in this our present licence permission holiday consent and concession together with the pre-eminencies prerogatives exemptions and liberties there described, make suffer and allow to the aforesaid Francoys de Tizal. And other aforesaid heirs enjoy and use fully and peacefully. Do not disturb them or put on to them bets, deals or contrary obstacles or sufferings or orders giving their right to others. Our receiver of Darney must promptly make known by letter also that he suffers the aforesaid Francoys de Tizal to enjoy our present grace and receipt of aforesaid supposed three small florins by him forgone by each one year by reason of our good pleasure.

And by a report from the aforesaid receiver a mention per one time in a certified authentic text of a copy of the original of his aforesaid presentation, he will be discharged and excused yearly of this amount for a long time as Francoys aforesaid enjoys our aforesaid grace and receipt without difficulty. For in this way pleases him. In testimony of it we have presently signed of our hand and made to put and append our seals. Give the eighteenth day October in our City of Luneville the year one thousand five hundred and five. So René sign.

Don Tyzack

[http://ourworld.compuserve.com/homepages/Don\\_Tyzack](http://ourworld.compuserve.com/homepages/Don_Tyzack)



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