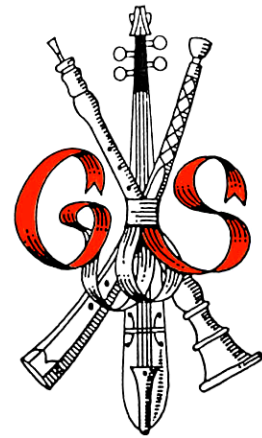


The Galpin Society

For the Study of Musical Instruments



Newsletter 44

February 2016



Handel & Hendrix Kirckman Harpsichord (see p. 10)

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THE GALPIN SOCIETY

Registered Charity no. 306012

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The Galpin Society Newsletter is edited and produced by Andy Lamb and Maggie Kilbey.		
Opinions expressed by authors in the newsletter are not specifically endorsed by The Galpin Society.		

We are pleased to welcome the following new members into The Galpin Society:

Luca de Paolis, L'AQUILA, Italy

David Godby, TOTLAND

Tom Kehoe, CAMBRIDGE

Samantha Muir & Josie Taylor, SHERBORNE

Thomas Packer, GRANTHAM

Daniel Rose-Jones, ST AGNES

Nicholas Sackman, NOTTINGHAM

David Wilson, IVER HEATH

Mark Witkowski, SUTTON

[Cover photo: Silver and tortoiseshell cartouche engraved with the maker's name JACOBUS KIRCKMAN, LONDINI FECIT, a trophy of instruments and the quotation O DECUS PHAEBI from Horace, Odes, 1.32.13. See p.10. Photo: Ben Marks]

EDITORIAL

In this bumper newsletter we announce the invitation for applications for the Andrew Britton Fellowship for guitar research (see below), and report on the sad closure of the Finchcocks piano collection (p. 7). You will also find news of developments in the display of a collection of 'west gallery' instruments in All Saints, Winterton (p. 8), the inauguration of the military music gallery at the Musée de l'Armée, Paris (p. 9), and the donation of a double-manual Kirckman harpsichord to Handel & Hendrix in London (p. 10). We also include a feature article on developments in the 3D printing of musical instruments (p. 4). Those members who attended the Cambridge conference may remember an excellent paper on this subject by Jamie Savan. This is obviously going to be an area of development, so expect more articles on this topic in the future.

Plans are already being made for the Galpin Society conference to be held 1-4 June 2017, hosted by the University of Edinburgh. This will be held jointly with the American Musical Instrument Society, and promises to be a very exciting meeting. Meanwhile, members can look forward to a visit to the RNCM Collection of Historic Instruments on 25 June (see below), and a Galpin Society visit to Barcelona which is being planned for September/October 2016. Further details will be given in the May newsletter.

A new membership list will be circulated with the 2016 Journal. Please ensure that you inform the society's administrator as soon as possible if your address or email address need to be updated.

Andy Lamb & Maggie Kilbey

The Galpin Society AGM

Saturday 25 June 2016, The Royal Northern College of Music, Manchester

This year's AGM will be held at 3pm on Saturday 25 June at the RNCM in Manchester. Between 1pm and 3pm, members are invited to visit the RNCM's [Collection of Historic Instruments](#), which comprises more than 300 instruments, including European wind, strings and keyboard and Non-European wind, strings and percussion instruments. The RNCM café will be open from 8.30am to 3.30pm. Details of how to find the RNCM are given here: [Royal Northern College of Music](#)

The Andrew Britton Fellowship

The Consortium for Guitar Research, an affiliate of the Royal Musical Association of Great Britain, invites applications from guitar researchers, at an early stage of their work, for a Fellowship in honour of Dr Andrew Britton who died suddenly last autumn. The Fellowship covers accommodation and college meals during the three-day colloquium of the Consortium at Sidney Sussex College, The University of Cambridge, to be held 9 April to 12 April 2016. Because membership of the Consortium is by invitation only, this award provides a unique opportunity to share ideas with a group of acknowledged experts in the field. See [The Consortium for Guitar Research](#) for more information regarding the Consortium and its members.

Although there is no age limit, the applicant for the Andrew Britton Fellowship must be deemed to be at an early stage of their work. During the conference, the recipient is encouraged to give a 30 minute paper or other account of their current research, but this is not obligatory.

Applicants are invited to submit their CV, and a 400 word (maximum) statement describing their latest research and why this award would be useful to them. The application must be sent via email, in a word or PDF document, to Professor Christopher Page chp1000@cam.ac.uk by 20 February 2016.

The chosen candidate will be notified by 1 March 2016 and is required to accept the place by 7 March 2016. The Consortium reserves the right not to appoint to the Fellowship if they deem no applicant suitable. The successful candidate will fund their own travel and must ensure any necessary visas are in place.

Dr Andrew Britton was a Founding Member of the Consortium. His PhD thesis *The guitar in the romantic period: its musical and social development, with special reference to Bristol and Bath* is a benchmark to all new scholars and is available online on the [British Library Ethos website](#).

The Andrew Britton Fellowship is funded by the Larkum Fund of Sidney Sussex College.

On the 3D Printing of Musical Instruments

The process of 3D printing, also known as 'Additive Manufacturing' (AM), has been in development since the 1980s when Hideo Kodama of the Nagoya Municipal Industrial Research Institute invented two AM fabricating methods of a three-dimensional plastic model with photo-hardening polymer. The process is known as 'Stereolithography' in which layers of material are laid down according to the developed design of the object desired.

Since those early processes were developed, a whole series of methods and materials have become included in this new form of manufacturing. Today it is possible to realize 3D objects in a variety of media including metals, plastics and other synthetics.

The critical path for the production of an object using AM has now been sufficiently de-skilled so as to enable a non-specialist to create objects without the profound background knowledge of the digital and other processes involved. Additionally, the cost of 3D printing units has now come down to the level whereby they are sufficiently affordable for people of middling means. The technology used by most hobbyist and consumer-oriented models is known as 'Fused Deposition Modelling' which is a special application of plastic extrusion.

On 22 January 2016 I visited Dr Mark Witkowski of Imperial College, London to inspect and report on the work he has been doing in this area. Dr Witkowski is not an instrument maker, having a background in experimental electronics and mathematics, however he has been working at Imperial College Advanced Hackspace with a number of other people who have developed an interest in this area.

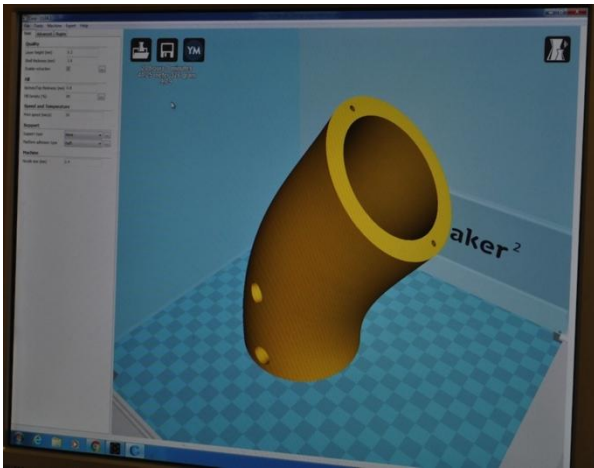
I should explain at this point what a 'Hackspace' is. According to the website: *'Hackspaces are places you can visit to meet people, learn, socialise and collaborate. A place to make your own projects a reality or help others with theirs'*. It should be noted that they tend to focus on digital and computer technology and they are physical spaces rather than internet chat-rooms. The more developed ones give themselves exciting but obscure names, such as: 'Techwizz', 'HackBurn' and, my local branch, 'OxHack'.



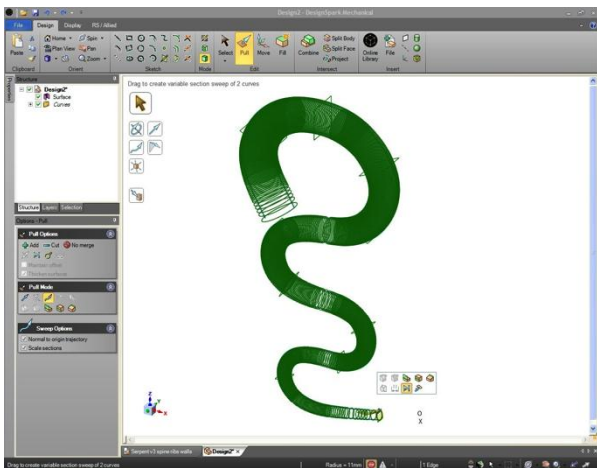
Imperial College Advanced Hackspace

There is a whole room in Imperial Hackspace devoted to 3D printing. When I visited a number of projects were in progress, including a chocolate mould, a set of cam-ratchets and a miniature representation of Doggerland, the details of which had been derived from a nautical mapping exercise.

Dr Witkowski explained the process to me. In the first instance a dataset is created. This can come from a number of sources, including internet downloads, CT scanning of original objects or creating it yourself from another solid object. This data is then used to create a Computer Aided Design (CAD) file. Dr Witkowski showed me a file he had created using information from measuring a serpent in the Bate Collection. Nowadays, it is possible to create a CAD file using 3D computer graphics, thus avoiding a whole lot of data-input and number-crunching. Using the dimensions of the Bate instrument, Dr Witkoski had created a series of CAD files of various components of the instrument, much as an historical English serpent might be assembled. There were a couple of reasons for this, the most compelling being that the affordable 3D printers have a maximum size of up to 300x175x175 mm. Larger printers do exist which could produce the instrument in two halves, but these are in a much higher price bracket. One of the other advantages in producing a large instrument in discrete parts is that any problems with one component would not impact on any of the others.



Once a successful CAD file, or series of files, is produced it is then converted (using commonly available software) into a STereoLithography (STL) file format. This is the preparation for conversion to the software provided with the printer, also known as the 'slicer'. This converts the model into a series of thin layers and produces a code file containing instructions for conversion to the printer-specific software. All the preparation can be done on a PC or Mac and the finished files transferred to the printer on an SD memory card of the type used for digital cameras, recorders, etc.



The next part of the process is setting up the printer. As mentioned above, there are numerous options here. The one shown to me at Imperial consisted of threading a roll of coiled plastic into a feed tube on top of the printer and then heating up the nozzle to 200 °C. This produces a steady stream of molten plastic that can be used to build up the thickness and density of the object as it rapidly cools. There are now a number of options for setting up the print. One aspect would be the thickness of the layers. The very finest layering could be at 0.1mm. However, a print of this quality and resolution would take considerably longer than a print at 0.2mm (more than twice the time). Dr Witkowski told me that the average time for printing off a serpent component using 0.2mm resolution was up to 10 hours. So, it is clear that there are a number of compromises that need to be considered.



The printed serpent components

The final process for completion of the serpent was to assemble the sections and seal the surface. Features such as tone holes were integrated into the print design. The real areas requiring finesse included the junction of the joint between the body of the instrument and the mouthpipe. This was resolved by lapping the joint with PTFE plumbers tape. The other crucial area was the mouthpiece design. After examining a number of serpent mouthpieces and taking moulds, Dr Witkowski finally found a successful mouthpiece design. Having tried the finished product I can assure you that this is a very successful technology for musical instrument making.

Dr Witkowski has made a variety of musical instruments using this technology, including crumhorns, cornetti, panpipes, transverse flutes and recorders. The raw data for many of these can now be downloaded from internet sources such as 'Thingiverse'.

There have been a number of claims in recent years regarding the manufacture of top-end instruments (violins, flutes, etc) using this kind of production technique. I have to say that I don't think we are there yet. However, as production methods improve and the cost of the equipment drops it cannot be long before manufacture of these more complex instruments is possible.

Andy Lamb

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Left: the 3D-printed serpent; right: Bate serpent (OXFBC) 504

[All photos: Andy Lamb]

Finchcocks Musical Museum closes for the last time

It is with some regret that we have to report the closure of Finchcocks. Set in an early Georgian manor house in Goudhurst (Kent), Finchcocks housed the private collection of pianist Richard Burnett MBE. Purchased in 1970, the building was used as accommodation to set up the Adlam Burnett workshop for the manufacture of copies of historical keyboard instruments. It also housed the Katrina and Richard Burnett collection of historical keyboard instruments. There were over 100 in all with perhaps 40 having been restored to full playing condition. Although it was a private collection the house was open to the public and was a frequent venue for musical recitals. The house was finally closed to the public on 31 December 2015. The plan is now for the collection to be split up. Katrina and Richard will be taking the most prized instrument to their new home while the rest will be auctioned off for charity.

The Burnetts hosted musical events for over 45 years but have now decided to take on a more manageable scale of activities.

The collection is to be downsized and the main bulk of instruments are to be sold for charity at auction. The proceeds of the sale will be for the benefit of 'The Finchcocks Charity for Musical Education'. The sale will be held on 11 May at [Dreweatts & Bloomsbury Auctions](#), Donnington Priory, Newbury. The preview opens on 29 April.

Although it contained a variety of keyboard instruments, Finchcocks was probably most famous for its comprehensive collection of historical pianos. There were over 70 instruments in the main display, all of which were catalogued by W. Dow in 1989. The collection included instruments by many famous and noted makers of the 18th and early 19th centuries, including Broadwood, Clementi, Beyer, Pleyel, *et al.*

There is to be one final chance to visit the collection on Easter Sunday, 27 March and Easter Monday, 28 March. There is no charge but places must be booked in advance, and donations for the benefit of the Finchcocks Charity will be welcomed. For further details please see [Finchcocks Musical Museum](#).

Andy Lamb

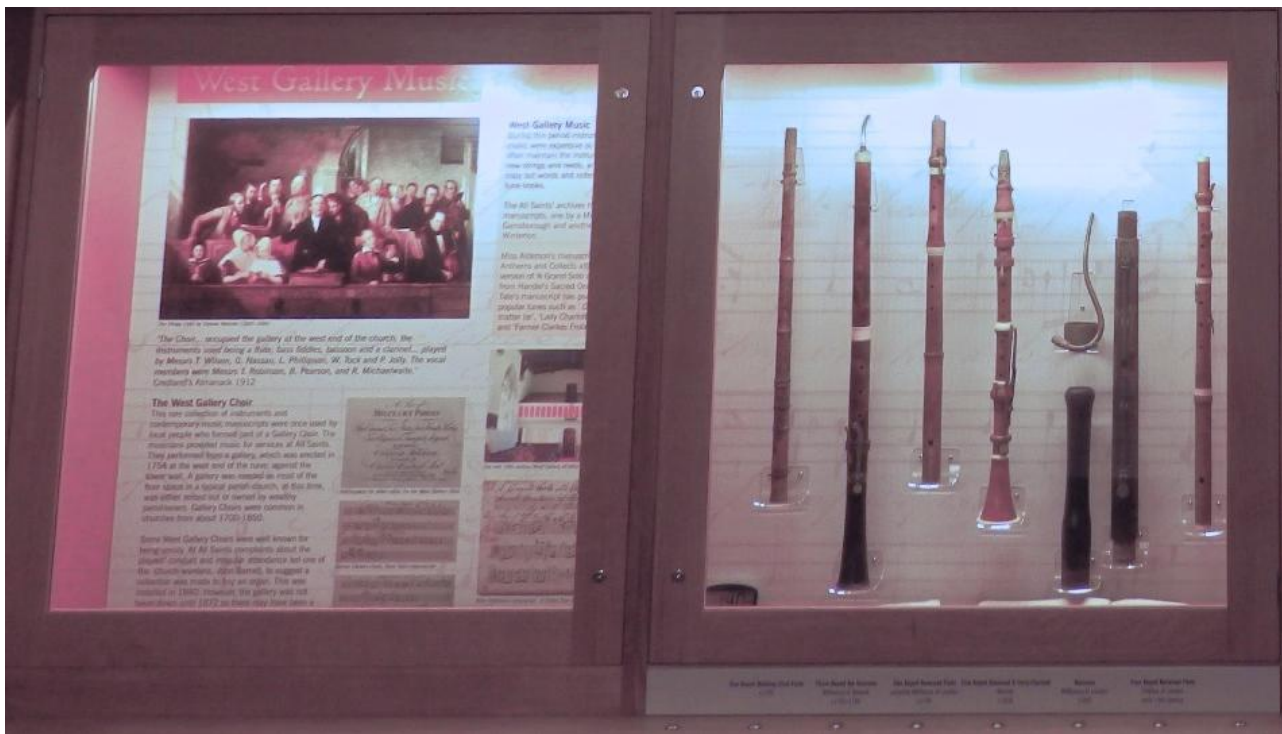
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Instruments from the Finchcocks collection. Left: single-manual harpsichord by Joachim Antunes (Lisbon, 1785); right: grand piano by Conrad Graf (Vienna, c.1820)

[Photo: Dreweatts and Bloomsbury Auctions]

'West gallery' instruments and manuscripts at All Saints, Winterton, North Lincolnshire



'West gallery' music display cabinet at All Saints, Winterton

[Photo: Robin Shawyer]

An ongoing Heritage Lottery Fund project 'All Saints: the story it tells of Winterton' has enabled the church to arrange full conservation of a set of 'west gallery' wind instruments and manuscripts. It has also funded a dedicated heritage display area with a permanent exhibition in bespoke display cabinets for the instruments and manuscripts. The six wind instruments were probably played by local musicians who provided music in the church before the first pipe organ was purchased.

The four booklets of handwritten manuscript have a mixture of sacred and secular music. These were, presumably, copied by some of the local musicians. Ruairidh Grieg has kindly transcribed the secular manuscripts to modern musical notation and these are available to download on the church website [Winterton Church Manuscript](#)

The instruments comprise:

- Bassoon by Milhouse of London (c.1800) [wing joint absent]
- 3-keyed vox humana by Milhouse of Newark (c.1763-1788). Similar to a 3-keyed tenor oboe or cor anglais
- 1-keyed walking stick flute, made to imitate a bamboo walking stick, maker unknown (c.1790) [lower section absent]
- 1-keyed boxwood flute, possibly by Milhouse, London (c.1790)
- 4-keyed boxwood flute by Phillips, London (early 19th century)
- 5-keyed boxwood and ivory clarinet in C by Metzler (c.1800)

The gallery at All Saints was erected in 1754 against the tower wall. A description from the 1830s states: 'The choir at the time occupied the gallery at the west end of the church, the instruments used being a flute, bass fiddles, bassoon, and a clarinet; these were played by

Messrs T. Wilson, G. Nassau, L. Phillipson, W. Tock and P. Jolly. The vocal members were Messrs. T. Robinson, R. Pearson, and R. Michaelwaite. The conductor of this unique choir gave great offence to one of the violin players by always looking at him when any mistake was made, and he threatened to give the conductor a smart switch with his bow if he ever dared to turn round again when a mistake was made, as the congregation thought that he alone was the cause. Their unsatisfactory conduct and irregular attendance at the services caused Mr. John Barratt, one of the Churchwardens, to decide upon having a change, and he called upon Mr. Godfrey Robinson, to assist him in collecting funds for an organ'. Although the first organ was purchased in 1840 the gallery was not taken down until 1872.

'West gallery' music events still take place at the church from time to time.

It is understood that the survival of an extensive 'west gallery' instrument and manuscript collection is unusual for a parish church, and it has aroused great interest. The church council is indebted to Daniel Bangham, Andrew Lamb and Graham Wells for advice about the instruments, and to the Bate Collection which kindly provided digital files to allow church visitors to listen to the sounds these instruments once made.

Currently the church is open for visitors between 2-4pm on Wednesdays and, from March 2016, 2-4pm on Saturdays. To arrange a visit at other times please contact me.

Robin Shawyer
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Musée de l'Armée, Paris

New Military Music Gallery

Members of the Society visiting Paris can enjoy a visit to Musée de l'Armée, the national military museum of France located at Les Invalides in the 7th arrondissement. On 12 January a new music gallery was opened, the product of several years of planning. Nearly 60 instruments, mostly wind, are well displayed along with musicians' uniforms and banners. The touch-screen labels and text panels are in French and English. Many of the instruments are accompanied with exemplary sound recordings, some using the actual exhibits and others on similar instruments in other collections. As well as instruments from the Musée de l'Armée collection, not seen in public for a long time, quite a number of the instruments are from the collection of the Musée de la Musique.

We congratulate the curator, Christine Helfrich, and the exhibition designers on a most attractive display.

Arnold Myers



Sax instruments in the new music gallery at the Musée de l'Armée

[Photo: Bruno Kampmann]

Handel & Hendrix in London

Jacob Kirckman harpsichord

Handel & Hendrix in London, formerly The Handel House Museum, has been given a magnificent two-manual harpsichord. The Jacob Kirckman, London (1754) harpsichord was for many years on loan to The Yale Collection of Musical Instruments, New Haven, Connecticut and featured prominently among its playing instruments. The harpsichord boasts an attractive and unusual decor and is fitted with the conventional machine stop found on double manual instruments of the period. Its interesting history of modification includes the early replacement of the original nag's head swell by a Shudi-style Venetian swell, which although removed during an early 20th century restoration, survives with the instrument. It is anticipated that the harpsichord will be used as part of regular performances at the museum. To book a visit to the museum see [Handel & Hendrix in London](#).

Ben Marks



The Kirckman Harpsichord

[Photo: Ben Marks]

NOTICES

The Piano in Polish Collections

Website launch

[The Piano in Polish Collections](#) is a new website run by the Institute of Music and Dance and curated by the musicologist Agata Mierzejewska. The website presents 100 historical pianos dating from the 19th and early 20th century exhibited in the National Fryderyk Chopin Institute, Andrzej Szwalbe Collection at the Ostromecko Palace, and the Museum of Industrial History in Opatówek.

The instruments document the role of the piano in everyday life, as well as the achievements of national and foreign piano-making industries. Each decade of the 19th century is documented with instruments built in accordance with the dominant taste and fashion of the era, including elegant grand pianos favoured by Fryderyk Chopin, Zygmunt Noskowski's instrument presented to the composer by the nation, numerous grand pianos by almost-forgotten Polish companies, as well as curiosities such as a piano for children which 'grows' together with the performer.

The Shofar – Its History and Use

My new book, *The Shofar – Its History and Use*, has just been published by Rowman & Littlefield. It covers the range of its use, both liturgical and secular, among many different communities and its typology, which varies even more among worldwide Jewry, as well as much else. Unfortunately the publishers have not corrected all the proof errors and, more serious, have omitted the General Index. All the other material is there and the book looks well on the whole, so anybody who buys it is welcome to email me and I'll send them pdf files of the outstanding corrections and of the General Index.

Jeremy Montagu

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