

Museum of the History of Science

Annual Report, 1 August 2010 – 31 July 2011

Highlights

Collaborations

As the Museum's reputation grows as a venue for creative events, opportunities for collaboration increase. Oxford Contemporary Music were clear that we provided the appropriate setting to premier Ray Lee's latest sound installation, funded by Arts Council England, the extraordinary, moving and enigmatic 'Ethometric Museum'. Collaboration with the Ruskin School brought us another site-specific work, Matt Galpin's 'Anvilled Stars', and a memorable evening of performance to close the show. The exhibition 'Al-Mizan: Sciences and Arts in the Islamic World', and its web version, resulted from our collaborative relationship with the Oxford Centre for Islamic Studies, while the Museum took the initiative in offering the Radcliffe Science Library a public presentation – in the Museum and on-line – for its poetry competition 'Parallel Universe'. This last example led to the Museum taking poetry as a theme for the month of February.

An award

The success of the initiative led by the cross-museums Volunteers Service to organise weekly tours for visitors by trained volunteer guides has been recognised by the award of the S.E. regional 'Marsh Trust Volunteers for Museum Learning 2011'. A presentation was made to the guides at a ceremony at the British Museum in June.

Education service growth

The number of school pupils attending taught sessions offered by the Museum's education service grew this year by an astonishing 40% to 4,210 (2,985 in 2009-10).

Lots of lectures

This year there were 12 full-length public lectures (7 of them preserved as pod-casts on the Museum's website); a further 8 shorter talks on Robert Plot's *Oxfordshire* were offered – and were well attended – on a on a single afternoon in November.

Steampunk lives on

In May the memory of the Steampunk exhibition in 2009-10 brought the Museum to the cover of the *Museums Journal*, as interest continues long after the exhibition has closed. The continued success of the YouTube video is mentioned in this report,

while the well-researched (72 footnote references) 'Steampunk' entry in Wikipedia is, as usual, spot-on (nearly):

From October 2009 through February 2010, the Museum of the History of Science, Oxford hosted the first major exhibition of Steampunk art objects, curated by Art Donovan and presented by Dr. Jim Bennett, museum director. From redesigned practical items to fantastical contraptions, this exhibition showcased the work of eighteen Steampunk artists from across the globe. The exhibition proved to be the most successful in the museum's history and attracted more than eighty thousand visitors.

Public Programme, Exhibitions, Outreach and Education

Exhibitions

The exhibition 'The Pleasures and Sorrows of Work' (mentioned in the previous annual report), closed on 5 September.

The major exhibition for the winter months was 'Al-Mizan: Sciences and Arts in the Islamic World', a collaboration with the Oxford Centre for Islamic Studies to mark their 25th anniversary. The exhibition explored the connections between the sciences and arts in Muslim societies, presenting highlights from the Museum's collection of Islamic scientific instruments alongside medieval manuscripts, metalwork and ceramics on loan from other major collections (the Khalili Collection, the British Museum, the Ashmolean Museum and the Bodleian Library), bringing to light links between scientific inquiry and artistic beauty through the decorative and practical work of craftsman. A popular feature of the exhibition (which was also added to the Museum's website) was a computer animation that explained the Museum's famous geared astrolabe, made in Isfahan in 1221. The animation was the outcome of a collaboration with the Hochschule für Technik und Wirtschaft, Dresden.

A web version of the exhibition was made in collaborations with the Oxford Centre for Islamic Studies and is now a permanent feature of the Museum's website (www.mhs.ox.ac.uk/almizan). A programme of associated events included public lectures by Professor Emilie Savage-Smith of the Faculty of Oriental Studies and two curators from the British Museum, Dr Venetia Porter and Dr Silke Ackermann; these can be downloaded as pod-casts from the Museum's website (www.mhs.ox.ac.uk/exhibits/podcasts/). A practical workshop for adults on constructing geometrical patterns in Islam was packed, and there was a range of talks, tours and family activities. We were pleased that the Vice-Chancellor was able to perform an inauguration ceremony on 16 November, though this was a few weeks after the exhibition had opened to visitors.

Under the ART@MHS strand of the Museum's programme, Matthew Luck Galpin exhibited 'Anvilled Stars' in the Top Gallery from 20 November to 6 February. On display, placed within the permanent display, were a number of mirrors forged from meteorites, alongside text by Brian Catling and two videos. Two special events were

organised in connection with the display – a public lecture by meteorite specialist Professor Monica Grady and a closing evening programme of music, poetry and performance art. A set of on-line resources is permanently available on the Museum's website (www.mhs.ox.ac.uk/anvilledstars). The exhibition has since transferred to the National Maritime Museum and the Science Museum.

An unusual exhibition on all three floors, from 1 to 27 February, resulted from a collaboration with the Radcliffe Science Library and Kellogg College. 'Parallel Universe' arose from a poetry competition organised by our partners, while we gave the ten winning poems a public space by recording the poets themselves reading their work and offering these at three listening posts in the galleries. The recordings were (and are) also available on the Museum's website (www.mhs.ox.ac.uk/exhibits/universe). The exhibition was part of a poetry theme for the month of February (see below).

One of the most original exhibitions (or installations) the Museum has mounted in recent years was the 'Ethometric Museum' – a display and sound installation by Ray Lee of Oxford Brookes. This was a joint venture with Oxford Contemporary Music, supported by Arts Council England. A extensive collection of 'ethometric' instruments, made by Ray Lee, was installed in the Basement Gallery for the month of April and there were 40 performances by Lee and his assistants, including 2 for the 'Night of Museums' in May. This work was premiered at MHS and has since travelled successfully to other venues. Here is a small selection from an enthusiastic, if sometimes puzzled, comments book:

The most moving & delightful piece of theatre/sound art/performance/magic I've seen all summer. I loved it.

Baffling, hilarious, intriguing - and then really quite beautiful. Wonderfully designed, perfectly sited. Definitely makes me feel more engaged with the Museum's collections.

Transfixing and also slightly baffling. In a way, if you know all the science it could lose a certain quality. But I suspect it's all magnets! So perfectly sited, it's incredible!

Evokes beautifully the age of demonstration in this great building. Great work.

Very clever! Loved the ending especially - very atmospheric.

What a fantastic and unique experience. Thank you.

The main summer exhibition, opening in the Special Exhibition Gallery on 10 May, was 'Eccentricity: unexpected objects and irregular behaviour', which allowed us to show many objects from the store that would not fit easily into the permanent displays, as well as telling some of the stories of Oxford scientific eccentricity. This formula worked well with visitors and the exhibition was very popular. The Museum has a great many intriguing and unexpected items – a Japanese clockwork flytrap, a Victorian explosive clockwork bird-scarer, a Chinese typewriter, in fact a collection of early typewriters, etc, and our collections allowed us to focus on some noted eccentrics, such as William Buckland and Ellen Willmott. For the first time the Museum publicised the fact that its rare 15th-century equatorium was probably used

by Nostradamus. There was the usual range of events that accompany the Museum's exhibitions, beginning on the opening night with a public lecture in the 'Between the Lines' series by Graham Farmelo on Paul Dirac, 'The Strangest Man'.

Exhibitions in the Entrance Gallery were: 'The Secret Life of the Museum' (10 August to 26 September), a display of a selection of the finds made beneath the floorboards at MHS in 1999, a decade after their first exhibition; 'Conservation: Securing the Past' (19 November to 27 February), which presented the variety of conservation work done in the Museum; 'IYC 2011' (8 March to 22 May), to mark the International Year of Chemistry; and 'Elliott Brothers' (24 May to 31 July), displaying instruments and archives from the famous manufacturers in physical sciences and engineering. In the basement, library exhibitions included 'Early Science in Broad Street' (21 September to 14 November), illustrating the early scientific work in the MHS building; 'Turning the Heavens' (25 January to 24 April), on the *Astronomicum Caesareum* of Peter Apian; and 'Treasures from the Museum Library' (from 5 July).

Education Service

Over the last year, the Museum's education programme has achieved record numbers of school visitors, totalling over 4,200 pupils engaged in taught sessions, a 40% increase on the previous year's figure. The family activities programme has also increased, with over 2,600 children engaged in informal drop-in activities and bookable taught workshops. These increases seem to indicate that all the hard work in developing a wide-ranging programme and in raising the profile of the Museum amongst teachers and family audiences over the previous six years since the inception of the Museum's education programme has led to substantial returns. The challenge now will be to maintain the qualitative standards of educational delivery in the face of increased demand and limited resources.

As well as further development and diversification of the programme of taught sessions to schools, the education team have maintained and extended the scope of partnership within the University and beyond. In the secondary programme, partnership with the University's Physics Department has continued with the delivery of study days for sixth-form students on astrophysics and medical imaging, along with a study day for pupils at Key Stage 3 on astronomy. Further collaboration with the Department of Materials has also led to combined workshops for GCSE students.

This year the Museum has participated in a pilot scheme in partnership with the other Oxford University Museums and Collections to deliver cross-curricular 'Museum Discovery Days' for whole-year groups from 2 local secondary schools, The Cherwell and The Marlborough Schools. It is hoped that this programme will attract other local secondary schools in the current academic year.

The University Museums and Collections have continued to play an important role in introducing trainee teachers to museum education. This year the Museum ran introductory sessions for 181 students in initial teacher training, a mix of primary- and secondary-sector trainees from Oxford Brookes University and the University's Department of Educational Studies. The Brookes partnership has been extended to

include a new scheme involving two-week placements of BEd degree students at the Museum in conjunction with their link primary schools.

A major development in the OUMC partnership this year was the launch of the HLF-funded 'Skills for the Future' programme for trainees in museum education. The Museum took on its first trainee for a six-month placement in May 2011. This turned out to be successful in terms of benefits to both the trainee and the Museum's education programme despite initial concerns about its possible impact on staff time.

With Michelle Holloway on maternity leave, the Museum's primary schools programme was covered by Lara Colyer, an experienced primary schools educator with an arts background. Apart from continuing with the developments which Michelle had initiated in extending the offer to primary schools with greater flexibility to meet the 'creative curriculum' policy, Lara confidently took on new work exploiting the opportunity of the Museum's special exhibition 'Al-Mizan' to run sessions exploring the Islamic collection. She also made use of her previous contact with East Oxford Primary School to initiate a new literacy project focusing on storytelling, supported by a £2,500 grant from the D'Oyly Carte Charitable Trust. This project began in the summer of 2011 in partnership with a storyteller from the Oxford Story Museum.

Within the secondary programme, the partnership with the Langley Academy continued into its third year with science sessions delivered to all pupils at Key Stage 3 in partnership with the University Museum of Natural History. This year the scheme was extended to Year 9 pupils in conjunction with the mathematics department at the Academy. Pupils enjoyed the opportunity to discover the principles of geometry integral to Islamic design whilst benefiting from the special exhibition, 'Al-Mizan'. The Langley Academy is the first school in the country to place museum learning at the heart of the curriculum but also enjoys specialist science status.

In February 2010 a new session on Galileo and the early history of the telescope was piloted making use of model Galilean telescopes in gallery-based practical activities, and a new session on 'Renaissance books' was delivered to a group of sixth-form history students from Cheney School; this session made use of the Museum's extensive library collection of books from the sixteenth and seventeenth centuries on anatomy, medicine, and natural philosophy.

Families have benefited from a wide variety of activities on offer in the Museum's family friendly programme. Popular events included the Islamic tile design activity assisted by artist volunteer, David McDiarmuid, and the qibla indicator workshop, 'Finding Mecca'. This year's Alice Day celebration also proved popular with 'Alice's Album' and a workshop involving children in the creation of a stop-motion animation film with 'StopMoGo' film maker, Emma Dougherty.

The Museum's education programme has continued to draw on the support of the cross-museums Volunteers Service creating new and exciting opportunities for experienced volunteers to participate in object handling sessions in secondary schools delivery, an initiative welcomed by the volunteers team. The Museum continues to receive support from the joint museums Art Education Officer and to participate in the OUMC community outreach programme.

As in previous years, the education team have participated in a number of external events involving professional development, including the delivery of a lecture presentation to the MADNet Conference (Museum Art and Design Network) in November 2010 to over 50 art teachers and museum educators, contributions to the 'Skills for the Future' project's series of training days, which have been opened up to external museum educators as well as the HLF trainees, and other professional forums.

Education service statistics

Schools: Number of pupils involved in taught sessions

Primary: 1596 (compared with 900 in 2009-10)

Secondary: 2614 (compared with 2085 in 2009-10)

TOTAL = 4210 (increase of approx 40% compared with 2009-10)

Family Friendly

Number of children involved in family events: 2646

Teachers

Number of trainee teachers involved in training sessions: 181 (primary and secondary)

Public Programme

Four quarterly programme leaflets were printed and distributed, and four further leaflets announced events linked to special exhibitions. In addition to more unusual events, a programme of frequent gallery talks, exhibition talks and 'table talks' was offered throughout the year by the curatorial staff and occasionally by visiting speakers. Volunteer-led weekly tours, offering an introduction to the Museum, continued throughout the year. Two titles were added to the series of printed 'Broadsheets'. Full programmes of public events were mounted for the two major exhibitions, 'Al-Mizan' and 'Eccentricity', dealt with under 'Exhibitions'. The attendance for the year was 165,058; this was down on the previous year's figure of 192,555, made exceptional by the outstanding popularity of the 'Steampunk' exhibition, but was an improvement on the previous year's total of 134,974.

The Museum's volunteer guides were presented with the S.E. regional 'Marsh Trust Volunteers for Museum Learning 2011' award at a ceremony at the British Museum on 23 June.

We concluded our programme of events marking the 350th anniversary of the foundation of the Royal Society (begun in the period of the previous annual report) into the second half of 2010. Public lectures were given by the Director and by Dr Anna Marie Roos of the History Faculty. Families were invited to 'Meet the Royals' in a workshop and two Saturdays offered sets of special activities.

'Words and Voices', on 18 September, was a themed afternoon of activities – readings, drama and display – presenting the memorable prose of early Oxford fellows of the Royal Society – Wilkins, Wren, Boyle and Hooke. It was a riposte to the Society's motto 'nullius in verba'. An anthology was published in the 'Broadsheet' series.

Saturday 13 November was devoted to Robert Plot's book of 1677 *The Natural History of Oxford-shire*, 1677. Local historians and natural historians from the county gave a series of eight talks on the record left by Plot and the relevant situation today. Plot himself was present (acted by Bill Moulford) and read passages from his book. The formula worked very well and the whole event created a very positive response from speakers and audience. The following are unsolicited emails from those who took part:

Thanks - it was a pleasure. I thought it was an excellent day - I much enjoyed all the other talks and learnt a lot!

Thank you very much..It was a lovely event..and so good to have resurrected Dr Plot!

I did enjoy it too - just sorry I could not stay longer. Glad to see the day (and the Museum) continues to attract such interest.

Both [-] and I very much enjoyed the event. There was so much varied and interesting information - it is a pity it cannot be collected together somewhere. It was so lovely to have folklore recognised as being interesting too - it is a rather neglected subject these days.

Just to say how very much I enjoyed the museum's Plot afternoon on Saturday – thanks!

We enjoyed it ... Dr Plot was splendid - a very nice touch. We both commented, not for the first time, on just how much superb work you have done in making the museum buzz these days and it was good to see the place thronging with visitors.

I enjoyed the event very much; I was just sorry that my meeting in London kept me from attending the whole event. However, I was delighted at the number of people that it attracted - you judged that perfectly for seating.

I wonder if you could get people to prepare their material for publication? even if you just collect their powerpoint presentations, these can be put on a website.

We held one of the Museum's distinctive '10/10 Days', when we open on a Saturday from 10 am to 10 pm for a programme of talks, exhibitions, trails, tours, activities, music and film on a particular theme – on this occasion '10/10 WORK', on 4 September. The day included reminiscences from Oxford residents of their working lives, talks on how a number of classic scientific instruments work, and gallery tours on themes in the working lives of instrument makers. The films were Chaplin's *Modern Times* and Godfrey Reggio's *Koyaanisqatsi*, with music by Philip Glass.

The Museum contributed once again to the Alumni Weekend with tours of the galleries included in the programme and Dr Bennett joining a panel of museum directors discussing 'The Future of Museums'.

The public lectures by authors of accessible but scholarly books in the history of science continued this year with Celina Fox talking about her outstanding book *The Arts of Industry in the Age of Enlightenment*, whose themes are closely aligned with the interests of the Museum. A successful collaboration with the Bodleian Library took place on 25 October with a lecture by Roger Smith, whose replica of a camera obscura in the Museum was used in an exhibition in Bodley; this was followed by a visit to the Museum, a tour of our instruments and a chance to try out the cameras made by the Museum's technician for our Education Service.

The Museum's theme for 'Christmas Night Light' this year, organised by 'Oxford Inspires' on 26 November, was 'Stars and Starlight', with an evening dedicated to spectroscopy, marking the subject's 150th anniversary. As well as talks on science and history, visitors had an opportunity to create their personal 'spectrum', where the pattern of lines characterised their personality and interests. We were open from 7 to 11 pm.

February was nominated a month of poetry featuring the 'Parallel Universe' exhibition mentioned above. Professor Jocelyn Bell Burnell gave a public lecture on 'Astronomy and Poetry' and poetry was a major part of the evening event 'Reflections in a Field of Heaven', organised by Brian Catling to conclude the exhibition 'Anvilled Stars'. The artists taking part were musicians Kristen Norrie and D. Gwalia, writers Nancy Campbell, Brian Catling and John Davies, and performance artists Holly Slingsby and Jack Catling. A book arising from this event, *Campo del Cielo: Reflections on the work of Matthew Luck Galpin*, includes contributions from Jim Bennett, Brian Catling, John Davies and Monica Grady.

On 26 February Eric Broug led an afternoon workshop for adults based on his book *Islamic Geometrical Patterns*, where participants learned how to use geometrical constructions to create their own tile patterns. Marconi Day (this year on 30 April) was once again marked by a radio station being operated in the Museum by the Oxford and District Amateur Radio Society

The 'Night of Museums', marked this year on Saturday 14 May, 7 - 11pm, took its theme from the 'Eccentricity' exhibition, with tours, family activities and additional demonstrations of Ray Lee's 'Ethometric Museum'. On 11 June an afternoon of 'Tales of Eccentricity' offered a series of gallery talks on eccentrics and peculiar objects in the permanent galleries to complement those in the special exhibition.

BBC2 filmed at the Museum in October for a programme on the King James Bible, and BBC4 for programmes on Marconi in March and on Tudor Education in June (Dr Bennett was interviewed). Malaysian TV filmed for a feature on Oxford in November. Dr Johnston was interviewed on Radio Oxford for the 'Secret Life of the Museum' exhibition on 14 October. On 24 May the Radio Oxford breakfast show outdoor broadcast came from the Museum, with six individual features.

Public lectures linked to the special exhibitions were:

25 January

‘Mapping the Earth in Medieval Islam’

Professor Emilie Savage-Smith

15 February

‘The Power of the Word: Amulets in Islam’

Dr Venetia Porter (British Museum)

8 March

‘Star Object: Astrolabes in Cultural Context’

Dr Silke Ackermann (British Museum)

7 December

‘Meteorites in Science and Culture’

Professor Monica Grady (The Open University)

1 February

Professor Dame Jocelyn Bell Burnell

‘Astronomy and Poetry’

10 May

Between the Lines

The Strangest Man: the Hidden Life of Paul Dirac

Professor Graham Farmelo

19 July

‘Crackpots and Eggheads: Eccentricity in Natural History’

Dr Brian Regal

Other public lectures were:

17 August

‘Printmaking and the Early Royal Society’

Dr Jim Bennett

12 October

Between the Lines

The Arts of Industry in the Age of Enlightenment,

Dr Celina Fox

25 October

‘The Camera Obscura’

Roger Smith

26 October

‘The Oxford Philosophical Society and the Royal Society: a meeting of minds?’

Dr Anna Marie Roos

13 November

‘Plot and the big bone’

Philip Powell (Oxford University Museum of Natural History)

‘The Wells at Enstone and the Woodstock Echo’

Julian Munby (Oxford Archaeology)

‘“That Great Virtuoso”: Sir Anthony Cope of Hanwell (d. 1675)’

Dr Rowena E Archer and Christopher Taylor (Hanwell Community Observatory)

‘Plot on John Dwight, Oxford’s celebrated potter’

Dinah Reynolds (Ashmolean Museum)

‘The Rollright Stones and the Devil's Quoits’

George Lambrick (Rollright Trust and Oxfordshire Architectural and Historical Society)

‘Plot’s “wood-cracker” and Oxonian ornithology’

Dr Andrew G. Gosler (Edward Grey Institute and Oxford Ornithological Society)

‘Plot and Roman Oxfordshire’

Revd Dr Martin Henig (Osney Benefice)

‘Customs and Folklore’

Christine Bloxham

1 March

‘Radio Manufacture in the Interwar Years’

Professor Peter Scott (University of Reading)

Collections Management and Conservation

Acquisitions

The number of acquisitions increased, compared with the previous year, due to the availability of additional storage space. They included a transfer from the Department of Engineering, a number of gifts, and a further group of 20th-century microscopes from the Royal Microscopical Society.

The Museum acquired the following items:

Gifts

A collection of rulers assembled by Mr Arthur Whillock, presented by his daughter Ms Christine Rhodes.

A sample of heavy water from Norsk Hydro in its original packaging, presented by Professor David L. Wark of Rutherford Appleton Laboratory and Imperial College, London

A planimeter and altimeter presented by Mr Pistone, Oxford

A selection of chemical glassware and other laboratory equipment, presented by Headington School, Oxford

Four microscopes dating from the 20th century, presented by the Royal Microscopical Society, to be added to the RMS-MHS collection of modern examples of microscopes

Purchases

Spackman & Co., cabinet of objects forming a portable museum, originally used as a teaching aid at The Alice Ottley School in Worcester.

A group photograph (a very fine platinum print, mounted with identifying captions) of the Oxford University Chemical Club dated 1911; the Museum has the manuscript minute books of the club and an extensive collection of photographs of Oxford chemists, but had no group photograph of the Chemical Club

Transfer

From the Department of Engineering:

A Newton & Co. gyroscope, c. 1905

An Everett Edgcombe portable photometer, Trotter pattern, c.1910?

A Tycos micro-barograph by Short & Mason for E. R. Watts, c.1902

A portable hardness tester by CTC

A conductivity measuring bridge by Electronic Switchgear London Ltd., 1960s?

A polaroid camera, c. 1960

Documentation

Work continued to upgrade database entries for individual objects and groups of objects. This included adding accession information, provenance details and other supporting information, as well as the removal of anomalies arising from migration from the earlier system.

Regular general photography of objects on display and in storage was introduced, alongside a policy to photograph objects prior to their inclusion in internal exhibitions. The period also saw the beginning of photography of groups of long-term loans to the Museum, e.g. the Christ Church Orrery Collection.

Off-site Storage

The gradual departure of the Department of Engineering from the Old Power Station building, with a final handover to Estates in January 2011, affected management of our store on this site. Lack of use, air movement and winter heating in the previously occupied area resulted in increased humidity and reduced air circulation in our previously relatively stable storage areas. Estates were prompt in restoring heating and air circulation, and provision of separate heating control for one of our storage areas. Problems continued however indicating the need for local dehumidification and ventilation in the rooms the Museum occupies. Investigation of solutions took place

during the period, with consultation with colleagues at Pitt Rivers Museum and Bodleian Library specialists in this area and Estates.

Work also took place to deal with problems created by pigeons and to check and upgrade security generally in the absence of a major department on site to oversee the building. Toilet and kitchen facilities were set up and maintained jointly with Pitt Rivers Museum staff.

Museum facilities for collections at the store were upgraded to some extent with the provision of a plan chest for storage of flat items and conservation materials, a chemicals cabinet and additional tables and moving equipment. There is now regular monthly cleaning by the Museum Janitor in all store rooms under supervision.

All material stored previously at the Comet Warehouse was cleared from this site during the period with the move of the Carrington Circle stone piers to the Old Power Station car park. Storage in the churchyard at Nuneham Courtenay proved not to be an option due to church regulations.

On-site Storage

Further low-level radioactive material was identified amongst the Moseley and Soddy collections with the assistance of Mark Bradley, University Radiation Protection Officer. Appropriate measures and records were put in place.

Emergency Planning and Response

A visit to Harwell Restoration Service by two members of the Emergency Planning Sub-Committee took place, joining with Pitt Rivers colleagues to establish what Harwell offer the University collections in terms of emergency response. There was a visit by Oxford City Fire Officers during the year to check information held about the Museum in the event of an emergency.

Researchers

The year saw a steady number of researchers, similar in numbers and range to the previous year. Underlining the need for off-site storage to be within reasonable distance of the main Museum. A third of these took place at the off-site store and the remainder entailed items being brought out of storage to the Broad Street site.

The following object research visits occurred during the year:

Martyn Bennett, private researcher: Marconi directionfinder goniometer, 2 visits

Jed Foland, DPhil student: use of and photography through early microscopes

Eric Saxton, Historical Society, East Ilsley: Isley turret clock

John Davis, private researcher: Japanese pillar clocks

Mr & Mrs Gaskin, private researchers: items associated with Ahrens

Dr Sloane Mahone, Wellcome Unit for the History of Medicine: trepanned skulls

David Berry, Ashmolean curator: Dyer Collection

Mariah Lookman, DPhil student, Ruskin School of Art: drawing instruments, 2 visits
Yuval Goren, University of Tel Aviv: microscopes including portable XRF analysis
of metals
Dr Arthur MacGregor: Oglander Collection

Loans

A steady and regular programme of loans, outgoing and incoming, continued through the year. The control of the number of agreed short-term outgoing loans had an important impact, allowing a return to other areas of the collections work alongside the loans programme.

Short-term loans

Outgoing

Bodleian Library

“My wit was always working”: John Aubrey and the Development of Experimental Science’

28 May - 31 October 2010

Inv 18184 - Plane Table and Alidade by John Worgan, London, c. 1696

Inv 31785 - Quadrant, by J. Rowley, English, c. 1700

Inv 40847 - Circular Slide Rule and Horizontal Instrument, by Elias Allen, London, c. 1634

Inv 75945 - Camera Obscura, English, c. 1710

Inv 28851 - Retort, English or Northern Europe, ?18th Century

Inv 44115 - Crucible, 'Hessian' Type, English or Northern Europe, ?18th Century

Inv 74333 - Crucible, 'Hessian' Type, English or Northern Europe, ?18th Century

Jewish Museum London

‘Illumination: Jewish Treasures from the Vatican and Major British Collections’

24 June - 10 October 2010

Inventory No. 12765 - Armillary Sphere, Italian, c. 1500

Landesmuseum für Natur und Mensch, Oldenburg, Germany

‘Lawrence of Arabia: Genesis of a Myth’

21 November 2010 - 27 March 2011

Inventory No. 21126 - T. E. Lawrence Archaeological camera & accessories

Inventory No. 92030 - Half-Plate Folding Field Camera and Kit, by R. & J. Beck, London

Compton Verney, Warwickshire

‘Capability Brown and the Landscapes of Middle England’

25 June - 2 October 2011

Inventory No. 40612 - Surveyor's Y-Level, by Adams, London, late 18th Century

Inventory No. 64523 - Simple Theodolite, by Addison Smith, London, later 18th Century, with mahogany box

The Royal Society London
150th Anniversary exhibition of the birth of Sir Frederick Gowland Hopkins, Nobel Prize winner and Founding Father of British Biochemistry
14 December 2010 - 20 June 2011
Inventory No. 43720 - Duboscq Colorimeter, by Laurent, Paris, after 1892

Purton Historical Society, Purton Museum, Purton, near Swindon,
Maskelyne Bicentenary Exhibition
1 June - 22 September 2011
Inventory No. 38636 - Sextant, by Gilbert, Wright & Hooke, London, 1794-1801
Inventory No. 44156 - Two-day Marine Chronometer, by Dobbie McInnes Ltd, Glasgow, c.1900, without wooden case
Inventory No. 48062 - Plain Altazimuth Theodolite, by Thomas Jones, London, 1816-1850

A loan of the portrait of Hevelius (on loan to the Museum from the Bodleian Library) to the City of Gdansk during this period was handled by Bodleian Library Exhibitions staff.

Travelling loans

Outgoing

New Walk Museum in Leicester.
V&A Museum of Childhood, London in connection with the exhibition, 'Space Age: exploration, design and popular culture', final venue 29 May to 9 October 2010:
Inventory No. 40743 - Celestial Planisphere by Wauthier, London, Early 19th Century
Inventory No. 43370 - Orrery, English, Early 19th Century, Unsigned
Inventory No. 21434 - Gregorian Reflecting Telescope, by John Cuthbert, London, c. 1830

Long-term loans out

Loans were continued to the Castle Heritage Centre and Gallery (Bude), the Museum of Oxford, the National Maritime Museum, the Museum of Science and Industry (Manchester), the Jenner Museum, the Science Museum, and the Hunterian Museum (Royal College of Surgeons, London), as well as within Oxford to the Sheldonian Theatre, the Examination Schools and Linacre College.

Short-term loans in

Loaned objects were included in the exhibitions 'Anvilled Stars' (from the artist, Matthew Luck Galpin) and 'Al-Mizan: Sciences and Arts in the Islamic World' (from the British Museum, the Khalili Collection, London, the Bodleian Library and the Ashmolean Museum).

Conservation

Conservation of 74 objects was completed this year and two longer-term conservation projects are continuing. In addition, some objects in store have been assessed, after having been affected by mould growth and in advance of a future full audit; remedial work has been done on some of the affected objects. The large electrostatic machine, on open display in the basement gallery, has required work several times over the year, due to repeated damage by visitors.

The total includes the objects worked upon for exhibitions, as follows:

‘Al-Mizan’ exhibition: a total of 9 objects.

‘Eccentricity’ exhibition: 13 objects.

‘Chemistry’ exhibition: 20 objects.

‘Elliot Brothers’ exhibition: 17 objects.

The Conservator produced an exhibition on conservation, mounted in the middle gallery from 19 November 2010 to 27 February 2011, with further conservation labels added to other objects on display in all galleries.

Asbestos sampling was carried out by an external company on a small number of suspect objects.

The Pointer Collection was re-assessed at the request of the owners, St John’s College, as a preliminary to discussing the condition of the collection and the possibility of having it conserved. Also assessed were the boxed items of exploration materials from the Oxford University Exploration Club equipment.

Conservation work on objects requested for loan out to other museums, which includes assessment, conservation, condition reporting and packing for transit, included objects going to Compton Verney, Oldenburg and the Jewish Museum, London. Returned objects from loan to the V&A Museum of Childhood, the Jewish Museum and Oldenburg were condition checked on their return.

Conservation assessments and monitoring were required in connection with visits from researchers, for filming and for education sessions for schools. Advice was given to science departments on the care of collections, and visits from conservators from other museums were accommodated in the studio. Fluctuating environmental conditions in the store meant that strategies for managing this were devised and their implementation has begun.

Cataloguing Project for Early Photographs

The photograph cataloguing project – reported in last year’s report – has been completed by the Archivist. A detailed breakdown of the numbers of different types of photograph covered was prepared. This indicates that 1,965 entries have been made on the Museum’s computerised catalogue, mostly for individual photographs but in some cases for groups (one unusually large group described by means of a single entry containing an estimated 1,680 photographs), plus 40 entries for photograph albums or equivalent compilations (the albums containing altogether over 2,500 photographs). The limitations of large photograph albums being of necessity catalogued in a single entry were overcome by the provision of lists and indexes of

their contents where necessary. Well over 6,000 photographs have received an enhanced presence in the Museum's public catalogue

The Archivist does his best to fit the duties of curator of the Museum's important collection of early photographs into his limited working hours and to serve readers and enquirers, who are liable to increase as a result of higher-profile cataloguing. Cataloguing work begun during the photo cataloguing project but not comprehensively pursued due to the necessary limitations imposed by a finite funded project, and the cataloguing of further photographic material, have continued as time allowed.

Colour photographs were, in the end, excluded from the cataloguing project, a high proportion of the Museum's early colour photographs having entries in the computerised catalogue already; these are also improved and upgraded as opportunity arises. The importance of the Museum's holdings of early colour photographs is recognised by enquiries from and research visits by a number of scholars, who also benefit from the Archivist's expertise in this field.

Library and Archives

The severe cut in HEFCE core funding to the Museum has resulted in the loss of the post of Librarian and, although the Librarian moved to another post after the end of the reporting year, she was not available to provide statistics on the use of the library in 2010-11.

Archives

Work has continued on listing the large Elliott and Millburn archives, improving and updating manuscript cataloguing generally, and converting the catalogue of the Gunther and Sherwood Taylor archives to a modern word-processed format. The cataloguing and indexing of the Society for the History of Alchemy and Chemistry (SHAC) archive – reported in last year's annual report – was completed, and the detailed catalogue was well received at the Society's 75th anniversary celebration on 9 November. Various additions were made to the SHAC archive in the course of completing the catalogue and liaising in this connection with officers of the Society. The Royal Charters of the Royal Microscopical Society were transferred to the Museum to be kept with the existing RMS archive.

Archive Readers

The following scholars have visited the Museum or Museum Library to study manuscripts or other archives, photographs, or other material dealt with by the Archivist:

Ron Bristow (Elliott archive & objects)

Ezequiel Cassol (Brazil; Faraday daguerreotype, etc)

Giles Hudson (Oxford University; Acland & Willmott photographs, Verner balloon photographs, etc)

W. H. Brock (Leicester University; SHAC archive, Gowing papers)
 Russell Lord (Metropolitan Museum of Art, NY; daguerreotypes)
 Rhiannon Evans (Central Saint Martin's College of Art & Design, London;
 manuscripts & drawings as experimental records, inc Underhill, Soddy, &
 miscellaneous MSS)
 Mary Lale (pictures of Old Ashmolean Building)
 Budd La Rue (J.J. Lister papers)
 Mark Sutton (Stapleton papers)
 Anita McConnell (Elliott archive, Millburn papers)
 Roger Hutchins (Magdalen College, Oxford; photographs & drawings of Mars)
 Jeriba Pasola
 Gordon Wood (Oxford science examination papers)
 Robert Anderson (SHAC archive)
 Mariah Lookman (St Edmund Hall, Oxford; Stapleton Arabic MSS)
 Priscilla Roberts (Hong Kong University; Gowing papers re Sir Keith Hancock)
 Todd Ferry (University of Texas; Old Ashmolean Building history)
 Toner Stevenson (Sydney Observatory; observatory papers)
 Florence Grant (King's College, London; Ludlam MSS)
 S. T. Irish (Cambridge University; Brodie papers)
 Janine Freeston (Manchester University; early colour photographs)
 Wendy J. Turner (Augusta State University; alchemists' petition)

The following scholars, additional to the many routine enquirers, have been rendered significant assistance by e-mail or conventional correspondence:

David Hambleton (Radcliffe Observatory clocks)
 Anita McConnell (Radcliffe MSS, Watkins, William Owen)
 Richard A. Baker (Leeds University; microscope slides)
 John Brooks (Elliott)
 William Sheehan (Russell moon drawings)
 Penny Meyer (New Mexico; Jackson, sundial maker)
 Giles Hudson (Oxford University; Dawes, W. E. Miller, Acland, Willmott, etc)
 Adrian Marshall (Underhill photographs of Chinnor windmill)
 Elizabeth A. Alexander (Oxford physics)
 C. J. Gaskin (Ahrens)
 Eric Saxton (turret clocks)
 Alireza Asem (Iran; Gunther's work at Lake Urmi)
 Rosie Houldsworth (Gowing papers)
 William Poole (New College, Oxford; materia medica collections)
 Mark Davies (James Sadler)
 Joe Parish (Louisa Gunther)
 Elliott Dobson (College of Charleston: Old Ashmolean)
 Rupert Griffin (turret clocks)
 Ken Jacobson (daguerreotypes)
 Alison McDonald (Plant Sciences, Oxford; lantern slides)
 David Bryden (instrument makers' ephemera)
 David Berry (Dyer Collection)
 Caroline Marten (London University; Teasdale photographs)
 Thomas O'Connor (Galway University, NUI; Watkins & Hill engineering models)
 Isabelle Brent (Pitt Rivers Museum; visitors' books)
 M.C. Hunther (California Institute of Technology; Oxford Philosophical Society)

Information and Communication Technology

Web Developments and Projects

WordPress is now well established as the primary content delivery vehicle for the Museum's website, incorporating a new graphic design by Richard Rowley implemented as a customised theme.

The Museum has also been experimenting more with social media as it continues its outreach, seeking to broaden its audience. This has been especially the case with the 'Eccentricity' exhibition (10 May to 16 October), where the website has been populated gradually with content, including articles featuring eccentric behaviour of scientists. These and other items have been publicised through the Museum's Twitter account, the latest tweet being displayed on the front page of the website. In addition, the Museum continues to produce podcasts for iTunesU. Seven new podcasts of lectures were added to the website this year.

Online exhibitions have continued ICT collaborations both internally and externally with individuals and organisations, including: 'Al-Mizan', produced jointly with the Oxford Centre for Islamic Studies; 'Parallel Universe' (with Radcliffe Science Library); 'Ethometric Museum' (Ray Lee) and Matthew Galpin's 'Anvilled Stars'.

Whilst content creation has been flourishing, the year has seen the number of unique visits to the Museum's website decline to 413,494. The main factor in this decrease has been security, a growing concern throughout the University. During this period the website has been subjected to concerted hacking attacks resulting in two separate compromises one of which covertly output spam content to search engines, though visitors browsing the site did not see this. In the short term, this had a major impact on performance; in the longer term it reduced the number of pages in search engine indices and impaired the quality of the results returned from searches. For such an outward-facing site, this is a major problem.

In response, a thorough security audit has been carried out, covering our entire collection of mini sites, encompassing thousands of scripts. We have also placed editor access to WordPress under the University single sign-on system. The result is a far more secure and robust platform that now performs well. However, the breaches have continued to impact our visibility in search engines, particularly Google. Further measures have been implemented to address this, mainly to improve the quality of the code, guided by Google Webmaster tools. This effort is still ongoing and inevitably time has been lost regarding the development of new content.

On a more positive note, the Museum's Steampunk YouTube video has continued to draw interest, with more than 200,000 views by the end of the report year. It highlights how online presence is becoming increasingly dispersed.

Collections Management (ICT)

The migration of EMu Online was completed in January 2011 with refinements carried out to the online interface to the EMu collections database, so that more object details are returned, such as materials and dimension. There are also additional hyperlinks from many of the fields to allow greater exploration of the collection.

A considerable amount of new information has been input concerning the Museum's photographic collection.

Network and Systems Infrastructure

There have been some major changes to the Museum's infrastructure, which will help deliver more resilience for the future.

The migration of hosting arrangements with NSMS has been completed; the Museum now retains only one fully-managed server. The EMu systems and all but one of the Web services have been moved to virtual hosting on their VM4Rent service, providing considerable savings for the Museum.

MHS has replaced an ageing and faulty storage box hosted in the Museum by a more advanced 4TB networked solution hosted at OUCS. This is serving all the main storage needs, for use both on the departmental network and on the website. The firewall has been replaced and continues to be maintained by NSMS.

There has also been some network reconfiguration at the Osney store: following the move by Engineering Science, MHS has shared its connection with Pitt Rivers.

Teaching, Research and the Discipline

Dr Johnston and Dr Bennett contributed lectures to the 'Nature and Art' undergraduate course in the History Faculty.

The Museum continued to provide a venue for the meetings of the Society for the History of Medieval Technology and Science. The 'Making Modern Science' gallery team from the Science Museum visited on 15 February for discussions of their plans.

The Museum continued to host and administer the much-used and valued 'rete' bulletin board for the instrument history community. The Museum has joined with the Bodleian Library in administering the Douglas Byrne Marconi Fellowship, and a lecture by the first post-holder, Professor Peter Scott, was given on 1 March.

Dr Bennett continued to serve on the Advisory Committee of 'Wellcome Collection', the Astronomical Heritage Committee of the Royal Astronomical Society and the Board of Visitors for the Pitt Rivers Museum. He served on the editorial board of the journal *Nuncius*. He continues to sit on the University Security Committee. He is a

member of the international 'Comité de Réflexion' of the Marseilles Observatory and attended a meeting on 21 February to discuss the future of the Observatory and its collection. He chaired sessions in the Scientific Instrument Symposium in Florence in September and in the 'Universeum' meeting in Padua in May. He served on the Board of the History of Physics section of the European Physical Society and attended a meeting in Lausanne. He was appointed to the Council of the Hakluyt Society.

Dr Bennett was external examiner for a doctoral examination at the Ecole des Hautes Etudes en Sciences Sociales, Paris. Dr Johnston was a PhD examiner for the Glasgow School of Art and was internal examiner for a DPhil at Oxford. He acted as an advisor to the MLA for a case of Acceptance in Lieu.

Dr Johnston served on the publication committee of the British Society for the History of Mathematics. He continues to serve on the editorial board of *Scientific Instruments and Collections* and the International Advisory Board, Centre for History of Science, Royal Swedish Academy, Stockholm.

The Museum hosted a party for History of Science and Medicine staff, research workers and graduate students on 13 October.

Dr Bennett gave the following lectures and seminars:

1 August

'History from Objects: a Renaissance Sundial in Oxford', Continuing Education, Rewley House, Oxford

16 September

'The Place of Instruments in the Expanding Role of Mathematics', workshop on Renaissance and Enlightenment mathematics, Centro De Giorgi, University of Pisa

11 October

'Who or What was Galileo's Starry Messenger?', Cheltenham Italian Society

28 October

'The Cosmographical Role of Renaissance and Early-Modern Sundials'
Keynote lecture to the 'Inspiration of Astronomical Phenomena' conference, Bath

25 November

'Mathematical Instruments at the Early Royal Society'
Meeting organised by Gresham College at Wadham College to mark the anniversary of the Royal Society

14 January

'Topics from the Board of Longitude in the Eighteenth Century'
University of Cambridge, Department of History and Philosophy of Science

2 February

'Armillary Sphere and Astrolabe'
Antiquarian Horological Society, Midlands Branch, Warwick

24 May
'The Regiomontanus Cosmographical Sundial of 1474'
Department of History of Science, University of Uppsala

4 June
'The Leviathan of Parsonstown'
Eastbourne Astronomical Society

15 June
'The Art of Engraving'
Maison Française, Oxford

Dr Johnston gave the following lectures and seminars:

30 November
'Drawing Things Together'
National Hellenic Research Foundation, Athens

7 December
'Practices of Mathematics in England'
Lorentz Centre, Leiden,

21 April
'William Salmon: Polygraphice and alchemy'
Getty Research Institute, Los Angeles

13 June
'The Astrolabe, East and West'
Abingdon Astronomical Society,

14 June
'History of science from objects: the Oxford experience'
National Media Museum, Bradford

Staff Publication

Jim Bennett, 'MacCullagh's Ireland: the institutional and cultural space for geometry and physics', *The European Physical Journal H*, 34 (2010), 123-32

Museum Staff

Museum Staff

Staff in post at the end of 2010-11

Jim Bennett, Director
Stephen Johnston, Assistant Keeper
Margaret Hauser, Museum Administrator
Lucy Blaxland, Collections Manager
Cheryl Wolfe, Conservation Officer
Keiko Ikeuchi, Photography and Design Technician
Gemma Wright, Librarian
Owen Shaw, Technician (0.5)
Spiro Vranjes, IT Assistant (0.5)
Tony Simcock, Archivist (0.4)
Mariella Guida, Senior Gallery Assistant and Supervisor (0.4)
Anthony Lummis, Gallery Assistant (0.7)
Frances Turner, Gallery Assistant (0.3)
Elizabeth Mongomerie, Gallery Assistant (0.3)
Nick Wicker, Janitor (0.4)
Christopher Parkin, Education Officer (0.6)
Lara Colyer (maternity leave replacement for Michelle Holloway), Education Officer (0.4)
Paul Trafford, Web Officer (0.5)
Laura Ashby, Audience Development Officer (0.5)

Casual Staff (Gallery Assistants)

Margaret Barker
Chris Dadds
Manfred Driver
Vincent Mason
Nicole Shih
John Whitehead

Museum Visitors

Professor Pietro Corsi, History Faculty (Chair)
Professor Frances Ashcroft, Physiology Anatomy and Genetics Department
Professor Laurence Brockliss, History Faculty
Professor Roger L. Davies, Physics Department
Professor Mark Harrison, Wellcome Unit for the History of Medicine
Professor Jim Kennedy, University Museum of Natural History
Dr Mike O'Hanlon, Pitt Rivers Museum
Dr Luke Treadwell, Oriental Institute
Professor Harvey Brown, Philosophy Faculty
Dr Robert Anderson, co-opted Visitor
Mr Howard Dawes, co-opted Visitor
One of the Proctors or the Assessor