

Annual Review 2014



The Lovell radiotelescope at Jodrell Bank

The radio telescope at Jodrell Bank,
named after its designer Sir Bernard Lovell,
was the subject of the Society's
summer outing in July 2014



**Leeds Philosophical
and Literary Society**

Annual Report and Review

2014

The 194th Annual Report of the Council
at the close of the session 2013-14

*presented to the Annual Meeting held on
4th December 2014*

and

Reviews of events and of grants awarded in 2014

THE LEEDS PHILOSOPHICAL AND LITERARY SOCIETY, founded in 1819, has played an important part in the cultural life of Leeds and the region. In the nineteenth century it was in the forefront of the intellectual life of the city, and established an important museum in its own premises in Park Row. The museum collection became the foundation of today's City Museum when in 1921 the Society transferred the building and its contents to the Corporation of Leeds, at the same time reconstituting itself as a charitable limited company, a status it still enjoys today.

Following bomb damage to the Park Row building in the Second World War, both Museum and Society moved to the City Museum building on The Headrow, where the Society continued to have its offices until the museum closed in 1998. The new Leeds City Museum, which opened in 2008, is now once again the home of the Society's office. In 1936 the Society donated its library to the Brotherton Library of the University of Leeds, where it is available for consultation. Its archives are also housed there.

The official charitable purpose of the Leeds Philosophical and Literary Society is (as newly defined in 1997) "To promote the advancement of science, literature and the arts in the City of Leeds and elsewhere, and to hold, give or provide for meetings, lectures, classes, and entertainments of a scientific, literary or artistic nature". The Society is keenly interested in cultural developments in Leeds and the region, and is constantly looking for new ways to further its aims.

Application forms may be obtained from the Hon Treasurer and are also to be found on the Society's website.

Website: www.leedsphilandlit.org.uk

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THE LEEDS PHILOSOPHICAL AND LITERARY SOCIETY LIMITED
LEGAL AND ADMINISTRATIVE INFORMATION

Constitution	Company limited by guarantee. Registered number 177204 Registered charity number 224084
Governing document	Memorandum and articles adopted 2 July 1997.
Members of Council (who are trustees for charity law and directors for company law)	
President	J M Hill BA, DPhil, D Univ, FEA, FRSA, Hon ISAS
Vice-president	A C T North, BSc, PhD, CPhys, FInstP
Treasurer	J R Evans TD, FCA
Secretary	J E Lydon BSc, PhD
Other Council members	R J Bushby BSc, DPhil C M Taylor BSc (Eng), MSc, PhD, DEng, FREng, FIMechE, FCGI J N Douglas BA, MA P J Evennett BSc, PhD, Hon FRMS C J Hatton BSc, PhD, CPhys, FInstP P N Hirschmann MSc, FDS, FRCR, DDR (Resigned 10 July 2014) R Jakeways BSc, PhD, CPhys Councillor E Nash B F Richardson MA, MPhil, FBA M R D Seaward MSc, PhD, DSc, FLS
Registered Office	c/o Leeds City Museum Cookridge Street Leeds LS2 8BH
Website	www.leedsphilandlit.org.uk
Bankers	Lloyds TSB 6/7 Park Row Leeds LS1 1NX
Investment advisors	Investec 2 Gresham Street London EC2V 7QP
Independent Examiner	Katharine Widdowson ACA 406 Otley Road, Leeds LS16 8AD

THE LEEDS PHILOSOPHICAL AND LITERARY SOCIETY

194TH ANNUAL REPORT FOR 2013-2014

The Council presents its report and financial statements for the year ended 30 September 2014. The financial statements comply with current statutory requirements and with the requirements of the Society's memorandum and articles.

CONSTITUTION

The Society is a company limited by guarantee governed by its memorandum and articles of association. Membership is open to anyone on payment of an annual subscription of £18 which is due on 1 October each year. Only those members who have paid or have been elected to Honorary Membership are entitled to vote at the AGM. In the event of the Society being wound up, every person who is a member, or who has been a member within one year, is liable to contribute to the debts and liabilities of the Society a sum not exceeding £10.

STRUCTURE, GOVERNANCE AND MANAGEMENT

The members of the Council are considered to be both directors for Companies Act purposes and trustees for Charities Act purposes. One third of the members of Council retire by rotation at each Annual General Meeting (normally held in December), when appointments or reappointments are made. The Council has powers to co-opt to its membership. Membership of the Council takes into account the need to have members with expertise to cover the variety of activities of the Society. All members of the Society are notified prior to the AGM of the names of the Council members who are due to retire and are invited to submit nominations. The AGM held on 4th December 2013 approved the re-election of Dr Hatton, Dr Jakeways, Cllr Nash, and Professor Seaward.

The Officers of the Society are elected by and from the members of Council at the first meeting of Council following the Annual General Meeting; at the Council meeting on 16th January 2014, Professor Hill was elected as President, Dr Lydon as Secretary, Mr Evans as Treasurer and Professor North as Vice-President.

Council met on six occasions during 2013-2014. Parts of its business were delegated to the following committees: Grants, Events, Publications and Museums, chaired respectively by Dr Hatton, Professor Bushby, Mr Hirschmann and Professor Hill. These committees are required to act in accordance with the Society's Aims and Policies, and their recommendations are put to the Council for its approval. Mr Hirschmann resigned from membership of Council in July 2014, and the decision was taken to suspend the Publications Committee for the time being, there being no current plans for further publications beyond those of record, which are handled by the Council.

Mr Norman Madill has continued as Assistant Secretary, managing the Society's links with its members, the sale of its publications (in association with Jeremy Mills Publishing Ltd), and other necessary administrative matters.

THE SOCIETY'S AIMS AND ACTIVITIES

General

The Society aims to promote the advancement of science, literature and the arts in the city of Leeds and its immediate area. In furtherance of this aim, which Council believes to be of benefit to the public in this area, the Council's policy has been to disburse its income as follows by:

- providing a programme of free public lectures relevant to the Society's aims
- supporting the work of the City of Leeds Museums & Galleries
- supporting other activities in Leeds of a scientific, literary or artistic nature
- providing grants for purposes of research, publication, or artistic performance

Grant-making policy

In making grants to promote the advancement of the Society's aims, the Council places particular emphasis on (but does not limit its grants to) the support of activities which directly benefit the citizens of Leeds or assist those engaged in academic and scholarly activities relating to Leeds and its immediate area. It does not normally give grants in general support of students on taught courses. The value of grants is normally in the range £100 to £2,000, although this limit may be exceeded in special circumstances. The Council is keen to support new endeavours by the award of 'pump-priming' grants.

The Society's archives

The Society's archives are held in the Special Collections section of the Brotherton Library and during the year conservation work has continued on the more important documents in the collection. Professor North and Dr Hatton have undertaken a review of holdings in various libraries in Leeds with a view to ensuring that, as far as possible, there are complete sets of the Society's Annual Reviews for public access in the University of Leeds and City Libraries, and a further complete set in the Society's office. We are grateful to the Trustees of the Leeds Library for giving us two bound volumes of early Reviews, which contribute usefully to this project. Exploratory talks have taken place with the Leeds City Museum and the University of Leeds Special Collections on the subject of improving the preservation and accessibility of the Society's varied archive.

ACHIEVEMENTS AND PERFORMANCE

During the 2013-14 session, the Society continued its recent successes in fulfilling its aims as listed above, including a programme of artistic and scientific events for members and non-members as detailed below. During the year the Society lost 14 members through resignation or death and welcomed 14 new members, so that at the end of September 2014 the total number remained at 185.

Events

The regular monthly events covered a wide range of topics as usual and were always well supported both by Society members, guests and members of the public.

The following events took place:

- John Evans *Military Paintings*.
- Mike Hoyland and Matt Smithson *Pre-Bonfire-Night Spectacular*.
- The Priestley Lecture: Dr David Maw *Ben Franklin, Priestley's American Counterpart*.
- Annual General Meeting and Dinner, with after-dinner speaker, Professor Anthony Ougus *Operatic Experiences – Then and Now*.
- The Harrison Clock in the City Museum: Reception and lecture Dr Richard Dunn *Putting Harrison in his place*.
- Jim Gamble *Meccano*.
- Annual Science Fair – *in Leeds City Museum*.
- Prof Sheena Radford *Protein Folding - Nature's Origami*.
- John Atkinson Grimshaw Event - *unveiling memorial plaque at St George's Fields and lecture by Eveleigh Bradford*.
- Prof Joyce Hill *The Vale of York Hoard in its Viking Context*.
- Prof Eileen Ingham *Natural Tissue Scaffolds: off the shelf tissue transplants*.
- Summer visit to Quarry Bank Mill and Jodrell Bank.
- Natural History-Themed Road Show at the Discovery Centre, organised jointly with the Leeds City Museum.
- Bob Holman *Woodbine Willie, an unsung hero of World War One*.

In addition, the Society was represented at a number of events, including the preview of the Grayson Perry tapestries at Temple Newsam, and the launch of the Heaton Map project at Leeds Beckett University. The President and other members of the Council were also pleased to accept invitations to events associated with previous grant-awards.

Grants

During the year the following grants were awarded by the Society:

- Richard Wilcocks, £1000 towards the cost of commissioning James MacMillan to compose a work to be performed by Leeds Festival Chorus in the Town Hall in March 2014.
- John Frederick Mee, £1000 to support the delivery of an interactive drama and creative writing project, *Gawain and the Green Knight*, to 600 Years 5 and 6 pupils in Leeds and West Yorkshire.
- Anne-Marie Moore, £1000 to deliver a multi-sensory, switch-accessible computer system to facilitate meaningful play between disabled and non-disabled children at events in Leeds.
- Clare Brown on behalf of Leeds Museums and Galleries, £750 to purchase a second-hand 'Hill' entomology cabinet for the Discovery Centre.
- Benjamin Saunders, £1000 to purchase new music for the Diocese of Leeds Schools Singing Programme.
- Linzi Saunders, £750 to support *Pavilion's* young people's *The Follies of Youth*, in a history and community project excavating a lost Japanese garden in Otley.
- Anna Reeve, £750 to fund conservation work by the Leeds City Museum on the University of Leeds' ancient Cypriot collection.

- Professor Edward Royle, £100 to support the publication of a study of *The Great Yorkshire Election of 1807* by Ellen Gibson Wilson who died in 2008.
- James Lomax, £1000 towards the festschrift in honour of the late Dr Terry Friedman whose 30 year career was spent at Leeds Art Galleries.
- Dr Dolf Mogendorff on behalf of the Sinai Players, £1030 to support their performance of a new musical, Bridge Street, celebrating the Leeds Jewish community's early history, to be performed at the Carriageworks.
- Dr Andrew Turton, £1000 to contribute to the publication costs of *William Turton, Leeds and Horse Trams*.
- Jane Anthony, £1500 to support an English language production of Mozart's *The Magic Flute* by Young Opera Group.
- Hazel Costello, £250 to support the Otley Science Festival Family Science Fair.
- Jillian Johnson on behalf of the School of Music, the University of Leeds, £750 to support a performance of *Peter and the Wolf* by the Orchestra of Opera North in their 'Family Concert' series.

Publications

During the year the Society published a 48 page illustrated booklet, *Darwin's Finches: The Story of the Galápagos Finches*, by John W Grahame and David R. Westhead, with figures by John Lydon. Copies were distributed free of charge to all state and independent secondary schools and sixth form colleges in the Leeds area. This was intended to support the teaching of evolution by presenting the nature of Darwin's evolutionary observations in an accessible way and setting out the confirmation provided by the more recent evidence from DNA data.

The Leeds City Museum

As before, we have continued to enjoy a good relationship with the staff of the Museums, to whom we are most grateful for their collaboration. It has been helpful that Mr John Roles, the Head of Leeds Museums and Galleries, has attended a number of Council meetings. Council meetings have continued to be held in the Museum. The Museum's arena again provided a splendid theatre for our 'pre-bonfire night spectacular'.

The Museums Committee, comprising representatives from the Council and the Leeds Museums Service, has met twice in the course of the year and provides a valuable meeting place to discuss collaboration in the planning of events and the best use of grants for supporting the museum.

FINANCIAL REVIEW

The Society's budget aims to fund its events, grants and publications from its income. The Society's financial position has been monitored regularly by the Council and in discussions with representatives of Investec Wealth and Investments, our investment advisers. Dividend income from investments within the financial year amounts to £14,912, a return of 3.6% against 4.0% in the previous year. The market value of the Society's fixed assets investments in this year has increased by 3%. The investment advisers continue to work towards achieving the level of income that the Society has previously enjoyed. Our liquid reserves in the Charities Deposit Fund have increased slightly thanks to the small amount of interest that the fund attracts. The overall general unrestricted fund base of the Society has increased by some 2.7% to £437,769. This includes cash held by the Charities Deposit Fund and Investec at the year end of £45,064.

Reserves policy

The Society's reserves comprise an unrestricted fund derived from past benefactions and its annual subscriptions, including the proceeds from the sale of the Philosophical Hall to Leeds City Council in 1921. The fund has increased in value over the years as income exceeded expenditure. Since the Society adopted its new constitution in 1997, Council's aim in the medium term has been to balance its expenditure and income without depleting the capital value of its investments. The Society's income and expenditure do, however, vary from year to year depending on a number of factors. The Council therefore considers it prudent to hold liquid reserves in the Charities Deposit Fund and current bank account. The policy on reserves is reviewed annually by the Council as part of its annual budget review.

Investment policy

There are no restrictions in the Society's Memorandum and Articles on the Society's power to invest. The Council's investment objectives are to maintain a level of income sufficient to fund the Society's activities, while maintaining the capital value of its invested assets over the long term in line with inflation. To this end, it is the Society's normal practice to reinvest realised gains on its assets. The Council has delegated the management of its investments on a discretionary basis to Investec Wealth and Investment.

Risk management

- 1) Income: The investment managers pursue an active investment policy on the Society's behalf. The arrangements are regularly reviewed by the Trustees.
- 2) Expenditure: Expenditure on individual Grants, Publications and Events usually represents a small part of total expenditure and risks are minimised by standard procedures for authorisation of all financial transactions. The potential risks at the Society's events are considered as part of the planning for them, and appropriate steps are taken, including the arrangement of Public Liability insurance as necessary.
- 3) The quality of the Society's Events and Publications and the outcome of Grants that have been awarded are reviewed by the Trustees at their regular meetings so as to ensure that all the Society's activities are of a high standard consonant with its Aims.

The Society has taken advantage of the small companies' exemption in preparing this Directors' Report.

Approved by the members of the Council on 14 November 2014 and signed on their behalf by J M Hill (President) and J. R. Evans (Treasurer)

**STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 30 SEPTEMBER 2014**

	Note	2014	2013
		£	£
<i>Incoming resources from generated funds</i>			
<i>Voluntary income:</i>			
Subscriptions and donations		3,889	3,930
<i>Investment income:</i>			
Dividends		14,912	16,243
Interest receivable		134	192
<i>Incoming resources from charitable activities</i>			
Sales of publications	2	14	40
Income from events		2,945	3,452
Total incoming resources		21,894	23,857
 <i>Resources Expended</i>			
<i>Costs of generating funds</i>			
Investment management fees		4,008	3,786
<i>Charitable activities</i>			
Costs of publications	2	640	1,500
Grants payable	3	11,880	15,477
Other charitable activities	4	1,983	2,369
Cost of events		3,147	3,661
		17,650	23,007
Governance costs	5	4,192	3,368
Total resources expended		25,850	30,161
 <i>Net (outgoing)/incoming resources before other recognised gains and losses</i>			
		(3,956)	(6,304)
Other recognised gains and losses			
<i>Gains on investment assets:</i>			
Realised	6	405	4,250
Unrealised	6	15,194	32,343
		15,599	36,593
Net movement in funds		11,643	30,289
<i>Reconciliation of funds</i>			
Fund balance brought forward		426,126	395,837
Fund balance carried forward		437,769	426,126

The Society had no recognised gains or losses other than those shown above.

The notes on pages 12 to 15 form part of these accounts.

BALANCE SHEET
30 SEPTEMBER 2014

	Note	2014	2013
		£	£
<i>Fixed assets</i>			
Investments	6	415,025	403,141
<i>Current assets</i>			
Debtors	7	2,366	2,192
COIF Charities Deposit Account		29,431	29,312
Bank current account		1,508	2,030
		<hr/> 33,305	<hr/> 33,534
Creditors: amounts falling due within one year	8	(10,561)	(10,549)
<i>Net current assets</i>		<hr/> 22,744	<hr/> 22,985
		<hr/> <hr/> 437,769	<hr/> <hr/> 426,126
<i>Funds</i>			
General Fund - unrestricted		<hr/> 437,769	<hr/> 426,126

For the year ended 30 September 2014 the company was entitled to exemption from audit under sections 475 and 477 of the Companies Act 2006.

No member eligible to do so has required the company to obtain an audit of its accounts for the year ended 30 September 2014 in accordance with section 476.

Directors' responsibilities:

- The directors acknowledge their responsibilities for complying with the requirements of the Companies Act 2006 with respect to accounting records and the preparation of accounts.
- These accounts have been prepared and delivered in accordance with the special provisions in part 15 of the Companies Act 2006 applicable to companies subject to the small companies regime.

Approved by the Members of Council on 14 November 2014 and signed on their behalf by:

J M Hill President

J R Evans Treasurer

The notes on pages 12 to 15 form part of these accounts.

NOTES TO THE ACCOUNTS

FOR THE YEAR ENDED 30 SEPTEMBER 2014

1 Accounting policies

Basis of accounting

The accounts have been prepared using the historical cost convention except for the inclusion of investments at market value, and in accordance with the Statement of Recommended Practice "Accounting and Reporting by Charities", the Financial Reporting Standard for Smaller Entities and the Companies Act 2006.

Investment income

Investment income is credited when due, together with any corresponding income tax recoverable.

Publication costs

All costs of academic publications are carried forward until publication and written off in that year. No value is assigned to any stocks the Society holds of earlier publications.

Grants payable

Grants payable are voluntary payments to individuals or organisations in furtherance of the Society's objectives. Grants are accounted for when they have been approved by the council and the recipient has been told of that approval.

Governance costs

Governance costs are the costs of administering the charity, including communicating with members.

Fixed assets investments

Fixed assets investments are revalued at market value at the year end. All gains and losses, whether realised or unrealised, are reported on the Statement of Financial Activities.

	2014	2013
	£	£
2 Publications		
Income from Society's publication sales	<u>14</u>	<u>40</u>
Costs of academic publications:		
Printing "Darwin's Finches" booklet	<u>640</u>	<u>-</u>
	<u>640</u>	<u>-</u>
Grants for other organisations to publish		
Thoresby Society - Walks around red brick	<u>-</u>	<u>1,500</u>
	<u>-</u>	<u>1,500</u>

NOTES TO THE ACCOUNTS (continued)
FOR THE YEAR ENDED 30 SEPTEMBER 2014

	2014 £	2013 £
3 Grants payable		
Projects or organisations (12 grants)	7,530	7,375
Individuals (7 grants)	1,100	4,665
Leeds City Council (3 grants)	750	1,187
University of Leeds (2 grants)	2,500	1,750
University of Leeds for prizes	-	500
	<hr/> <hr/> 11,880	<hr/> <hr/> 15,477

The grant recipients are listed in the Annual Report for the year.

4 Other charitable activities

Public lectures and fireworks demonstration	1,983	2,135
Science Fair banner	-	206
Marketing leaflets	-	28
	<hr/> <hr/> 1,983	<hr/> <hr/> 2,369

5 Governance costs

Annual Review 2013	152	151
Stationery	143	85
Telephone & postage	460	135
Insurance	381	350
Sundries	376	47
Accountancy and independent examination	680	600
Assistant secretary's honorarium	2,000	2,000
	<hr/> <hr/> 4,192	<hr/> <hr/> 3,368

The costs for stationery, postage and the assistant secretary's honorarium include an element of support costs for grant making and publication sales. This is not material and cannot be easily identified.

No remuneration has been paid to any trustee in the year. No expenses (2013 - £nil) were reimbursed to trustees.

NOTES TO THE ACCOUNTS (continued)
FOR THE YEAR ENDED 30 SEPTEMBER 2014

6 Fixed asset investments

	Listed Investments	Cash for investment	Total 2014	Total 2013
	£	£	£	£
Market value at 1 October 2013	381,499	21,642	403,141	369,135
Disposals at opening market value	(69,780)	-	(69,780)	(103,519)
Cash reinvested	-	(2,032)	(2,032)	11,554
Investment management fees	-	(3,978)	(3,978)	(3,695)
Acquisitions at cost	72,480	-	72,480	97,323
Net gains on revaluation	15,194	-	15,194	32,343
Market value at 30 September 2014	399,393	15,632	415,025	403,141
Historical cost at 30 September 2014	353,585	15,632	369,217	355,977
Proceeds of disposal of investments			70,185	107,769
Realised gain			405	4,250

Analysis of investments

	Market value	
	2014	2013
	£	£
UK equities including unit trusts	149,270	157,542
International equities and property, including unit trusts	151,856	141,761
Gilts, bonds and fixed interest stocks	98,267	82,196
Cash held by investment managers	15,632	21,642
	415,025	403,141

Material investment worth more than 5% of portfolio

Aviva Investors UK US Equity Income	£ 20,858	£ 18,964
	415,025	403,141

NOTES TO THE ACCOUNTS (continued)
FOR THE YEAR ENDED 30 SEPTEMBER 2014

	2014 £	2013 £
7 <i>Debtors</i>		
Income tax recoverable	22	27
Investment income	1,513	1,481
Sundry debtors and prepayments	831	684
	2,366	2,192
8 <i>Creditors: amounts falling due within one year</i>		
Trade creditors	-	150
Grants approved but not yet paid	8,350	8,250
Accrued expenses	2,211	2,149
	10,561	10,549



The year's finances at a glance

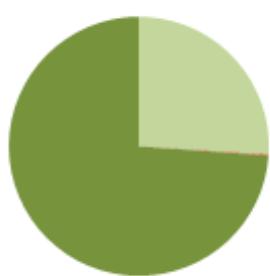
We are required by law to set out our finances in the form given in the preceding pages. It may however be helpful to set the Society's finances during the financial year in a different context. The Society sets a broad budgetary aim of funding its events, grants and publications from income during any financial year. To this end a budget is drawn up and approved by Council to attempt to achieve a balance between income and expenditure, determined on a receipts and payments basis, for the financial year. The pie charts for income and expenditure during the 2013-14 financial year are presented below.

Expenditure on grants in any financial year is not equal to the value of grants awarded in that year, as not all grants awarded are paid during the same year, and payments include those awarded in previous years; payments of substantial grants awarded in previous years was the main factor in the Society's expenditure being significantly greater than its income in 2012-3, but this was not the case in 2013-4.

As usual, the difference between events income and expenditure is small, representing hospitality for guests.

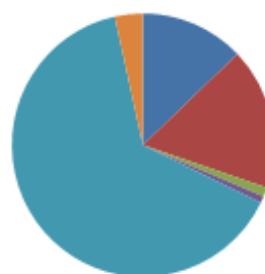
Dividends (less management fees) amounted to some 74% of the income and subscriptions (including gift aid) 26%. Grant payments represent 64% of expenditure, the cost of public lectures 13% and publication of the Darwin's Finches booklet 3%. Administration costs totalling 17% of expenditure include an honorarium, the accountant's fee, stationery, photocopying, telephoning, postage and printing.

John Evans, Hon. Treasurer



Income

- Subscriptions inc.
Gift aid (£3889)
- Sale of
publications (£14)
- Net investment
income (£11038)



Expenditure

- public lectures (£2369)
- administration (£3217)
- net cost of events (£209)
- Annual Review (£151)
- grants (£11880)
- publications (£640)

Presidents

(since the foundation of the Society)

1820-26	John Marshall	1919-22	Sydney D Kitson, MA, FSA, FRIBA
1826-28	Revd W H Bathurst, MA	1922-24	Arthur J Grant, MA
1828-31	Michael Thomas Sadler, MP	1924-26	Walter Garstang, MA, DSc, FZS
1831-33	William Hey	1926-28	Edwin Hawkesworth
1833-35	James Williamson, MD	1928-30	F W Branson, FIC
1835-37	Revd Joseph Holmes, MA	1930-32	E O Dodgson
1837-40	Revd Richard Winter Hamilton	1932-34	A Gilligan, DSc, FGS
1840-42	Adam Hunter, MD	1934-36	R Whiddington, MA, DSc, FRS
1842-45	John Hope Shaw	1936-39	Hugh R Lupton MC, MA
1845-50	Revd William Sinclair, MA	1939-46	W M Edwards, MC, MA
1850-51	William West, FRS	1946-48	E A Spaul, DSc, PhD
1851-54	Revd Charles Wicksteed, BD	1948-50	W L Andrews
1854-57	John Hope Shaw	1950-52	J N Tetley, DSO, LLD
1857-58	James Garth Marshall, FGS	1952-54	Terry Thomas, MA, LLD, BSc, PhD
1858-59	Revd W F Hook, DD	1954-56	H C Versey, DSc, FGS
1859-61	Revd Alfred Barry, MA	1956-58	H S Vick, JP
1861-63	Thomas Pridgin Teale, FRS	1958-60	H Orton, MA, BLitt
1863-66	Revd Thomas Hincks, BA	1960-62	Sir George Martin, LLD, JP
1866-68	Charles Chadwick, MD	1962-64	E J Wood, MA
1868-72	John Deakin Heaton, MD	1964-66	R D Preston, DSc, FInst P, FRS
1872-74	Revd Canon Woodford, DD	1966-68	J le Patourel, MA, DPhil
1874-76	J I Ikin, FRCS	1968-70	G P Meredith, MSc, MEd, PhD
1876-78	Revd J H McCheane, MA	1970-72	J G Wilson, MA, PhD, FInst P
1878-81	T Clifford Allbutt, MD, FRS	1972-74	J Taylor, MA
1881-83	Revd John Gott, DD	1974-76	H Henson, DSc, PhD, FRES
1883-85	J E Eddison, MD	1976-78	P R J Burch, MA, PhD
1885-86	Edward Atkinson, FLS	1978-81	R Reed, MSc, PhD
1886-89	Thomas Marshall, MA	1981-83	Lord Marshall of Leeds, MA, LIB
1889-92	Thomas Pridgin Teale, MA, FRS	1983-85	B R Hartley, MA, FSA
1892-94	Revd J H D Matthews, MA	1985-87	D Cox, BA, ALA
1894-96	Revd Charles Hargrove, MA	1987-89	B Colville, MB, BS, FRCGP
1896-98	Edmund Wilson, FSA	1989-91	I S Moxon, MA, BA
1898-00	Nathan Bodington, MA, LittD	1991-93	R F M Byrn, MA, PhD
1900-02	J H Wicksteed, President InstME	1993-95	Mrs J E Mortimer, BA
1904-04	Arthur Smithells, BSc, FRS	1995-97	A C Chadwick, BSc, PhD, DSc, CBiol, FIBiol, FRGS
1906-06	J E Eddison, MD	1997-99	O S Pickering, BA, BPhil, PhD, DipLib
1906-09	E Kitson Clark, MA, FSA, MInstCE	1999-03	P J Evennett, BSc, PhD, Hon FRMS
1909-11	Revd J R Wynne-Edwards, MA	2004-07	M R D Seaward, MSc, PhD, DSc, FLS
1911-12	C T Whitmell, MA, BSc, FRAS	2007-10	C J Hatton, BSc, PhD, CPhys, FInstP
1912-14	P F Kendall, MSc, FGS	2010-13	A C T North, BSc, PhD, CPhys, FInstP
1914-17	Revd W H Draper, MA	2013-	Joyce M Hill, BA, DPhil, DUniv, FEA, FRSA
1917-19	James E Bedford, FGS		

Life Members

Byrn, Dr R F M	Moxon, I S
Day, N	Pantin, Dr H M
Laurence, Miss M	Tetley, R J

Subscribing Members, as at 31.12.2014

Adamthwaite, Professor A P	Dalton, Dr S	Hatton, Dr C J
Alexander, Professor R McN	de Pauw, Dr K	Hayton, Ms M
Andrews, Professor R A	de Pennington, Mrs J	Henderson, A
Archenhold, W F	Devereux, Dr T A	Henderson, Professor P J F
Arnold, J O	Diamond, N	Higgins, Dr J M
Aufderhorst, U, Ms	Dodson, Mrs H I	Higgins, Dr S J
Ash, D	Douglas, Ms J N	Hill, Professor J M
Baker, Dr R A	Dowson, Professor D	Hindmarch, Professor I
Barker, Ms J	Drewett, Dr R	Hope, Professor T E J
Beddows, Professor C G	Drife, Dr D	Hoyland, M
Bellerby, Mrs E	Eastabrook, Ms G	Hunt, S.
Bielby, N	El-Hassani, M R	Jakeways, Dr R
Blair, Professor G E	Evans, J R	James, M
Blair, Dr M	Evans, Ms L	Jenkins, Professor E W
Boothroyd, K	Evennett, Dr P J	Johnson, Dr C L
Bower, Dr D I	Eyres, Dr P J	Jones, D
Briggs, M	Farmer, P J	Jones, Mrs R L
Britten, E A	Finnigan, R E	Kaye, R
Brown, Mrs C	Fish, B	Kellerman, Mrs S
Buchanan, Mrs M	Fish, Mrs C	King, Dr M H
Bushby, Professor R J	Fletcher, Mrs C	Kirby, Revd Dr D A
Butlin, Professor R K	Fletcher, Dr C R	Knapp, Dr D G
Cecil, Hugh	Forbes, Mrs M	Knowles, R
Chadwick, Mrs A L	Gaunt, Dr G	Lance, Professor C E
Chadwick, P R P	Godfrey, Ms M A	Larkin, B
Chesters, Dr M S	Gooday, Professor G	Lawson, P W G
Childs, Professor W R	Gosden, Dr M S	Lewis, Dr E L V
Clarke, Mrs E A	Grady, Dr K	Lockett, Dr A
Collins, C J	Griffin, Mrs E	Lydon, Dr J E
Colville, Dr B	Griffiths, Dr W K	Lynch, Ms K
Conaboy, A	Hall, Dr K	McCleery, Dr I
Cooper, Miss E	Hammond, Dr C	McTurk, Professor R
Crosswell, R	Hann, Professor M A	Madill, N
Cruse, J	Harrison, Mrs H	Marchant, Dr P
Dagg, Dr M	Harrison, M R	Meadowcroft, M

Meredith, Professor P
Mill, Dr P J
Millner, Dr P A
Monaghan, J J
Morgan, Professor G J
Morgan, C J
Morris, A
Morrison, A
Müller, A E W
Murphy, K
Nash, Cllr Mrs E A
Newiss, Miss J
Nix, P J
North, Professor A C T
Oakshott, Ms J, MBE
Olakulehin, F
Oughton, J
Parker, Dr K D
Parry, Professor G
Paynton, Ms C
Peat, Dr D W
Pickering, Dr O S
Plant, Mrs I
Proctor, Ms J
Rastall, Professor G R
Rawnsley, Dr S J

Reynolds, P
Richardson, Professor B F
Reynolds, P
Roberts, Professor K J
Robson, Ms R M
Roche, Mrs G M
Rushton, Professor J G
Salinger, Dr D
Sanderson, Dr J
Savage, Professor M D
Seaward, Professor M R D
Sellen, Dr D B
Sentug, Ms A
Shaw, K
Sherwin, Dr J R
Slomson, Dr A
Smith, Mrs A
Smith, Mrs D
Smith, W
Smithson, R T
Sowrey, Dr J T
Speakman, Dr P T
Stafford, Professor P A
Stephenson, Mrs A
Sunderland, Dr P
Suter, Mrs P A

Sutton, Dr S L
Swire, Ms L M P
Taggart, Ms L
Tannett, P G
Taylor, Professor C M
Taylor, Professor D
Temple, Mrs M
Thomas, M E
Thornton, Dr D
Turton, Dr A
Unsworth, Dr R
Wainwright, M
Wainwright, Mrs P
Watson, Professor A A
Webster, I C
Welch, Dr R B
Wesley, Mrs J
West, A
Widdowson, Mrs J
Wilson, Miss C A
Winn, P
Wood Robinson, Mrs V
Wright, Dr P G
Wyatt, Dr H V
Yates, B J



Reports of Events held during 2014

Editor's note: the events described below cover the calendar year 2014 and therefore differ from those listed in the Annual Report section of the Review for the financial year 1 October 2013 to 30 September 2014.

In addition to the events reported on below, the Society was pleased once again to organise the Annual Science Fair, held in the City Museum. This took place in March as part of the activities of National Science Week, and was primarily aimed at younger people, although the appeal of the event across all age ranges was plain to see.

We were also delighted to be able to support the Museum's series of lectures held in conjunction with the exhibition *Roman Empire: Power and People*. This was a travelling exhibition from the British Museum, with which some of the city's own Roman holdings were expertly integrated. Many of these had originally been part of the Philosophical and Literary Society holdings, so it was good to see them on display in such a well thought out and well displayed context, with appropriate acknowledgement to the Society. Recognising that the Society was responsible for a number of the local finds, and that many of these items were dug up or collected in rather serendipitous ways, we chose to sponsor the lecture which best reflected this in a modern context: 'A Cock and Bull Story: Roman Finds from Yorkshire recorded by the Portable Antiquities Scheme'. This was given by Amy Downes, of the West Yorkshire Archaeological Advisory Service, on 6 November 2014.

The Installation of the Harrison Clock in the Leeds City Museum

23 January 2013

The year began with an event organised jointly with Leeds Museums and Galleries, when Dr Richard Dunn of the Royal Museums, Greenwich, gave a lecture in the City Museum on John Harrison's development of his land-based and marine chronometers. In addition to the lecture, members enjoyed a reception and the opportunity to view the Museum's new permanent display of Harrison's precision-pendulum clock no. 2. The Society had made a substantial grant towards the cost of this display, which has been much admired as a celebration of one of Yorkshire's most distinguished sons. Its official opening on 23rd January 2014 was also a timely celebration of the tercentenary of the Longitude Act, to which Harrison so successfully responded in finally developing the sea-watch (known as 'H4') which allowed for the accurate determination of longitude when at sea. Although this event would normally have been reported in the present *Annual Review*, it was decided that, in view of its topicality, it should be included in a special section of the *Annual Review* 2013, which was published soon after.

Editor

Meccano – Jim Gamble

23 February 2014

In 1901, an office clerk from Liverpool, Frank Hornby, had an idea to amuse and educate his children: strips of metal perforated at half-inch intervals, which could be screwed together to make models. He called it 'Mechanics Made Easy', soon afterwards to be renamed 'Meccano'. It was destined to become the most instructional toy of its time, and one which still survives more than 100 years on. From its simple beginnings, Meccano developed with the addition of plates, girders, gears,

axles, wheels, clockwork motors, and later electric motors. It was supplied as outfits of increasing complexity and cost, with conversion sets to upgrade, and was marketed worldwide. Within twenty years Meccano was joined by Hornby Trains, at first clockwork and later electric, by Dinky Toys in 1933, and by the smaller Hornby Dublo trains in 1938.

The Meccano story was told to us by Jim Gamble, who is retired from the Chemistry Department at the University of Nottingham, and has amassed one of the world's most extensive collections of Meccano products, and written books on the subject. This beautifully-illustrated talk took us through Hornby's life and the development of the famous factory in Binns Road, Liverpool, to its sad demise. His illustrations of the manufacturing processes in the 1930s – stamping the holes, nickel-plating, spray painting – showed that these somewhat hazardous processes were carried out by young women wearing no special protective clothing other than a loose overall and perhaps a hat. In keeping with this gender stereotyping, all the young people in the advertising pictures were boys, properly dressed in jacket and tie, and occasionally accompanied by a smiling pipe-smoking father.

Jim illustrated a wide range of models made from Meccano, which demonstrated important mechanical principles such as levers and gearing: as a boy, I personally liked building cars and lorries with properly functioning gearboxes, and cranes capable of lifting a heavy weight of books using a small electric motor. Beyond its value as a toy, Meccano has had important uses in research and teaching, notably Douglas Hartree's analogue device for solving differential equations.



Jim Gamble's home store of Meccano & Hornby items

The talk illustrated the breadth of the Meccano product range – not only the construction sets and Hornby trains and their rolling stock, but also chemistry and electrical sets (Kemex and Elektron) and Bayko buildings. All of these fostered manual dexterity and, together with the *Meccano Magazine*, improved mechanical understanding and had a genuinely educational influence on generations of young people.

Sadly, during the 1970s, financial difficulties, poor management and bad labour relations led to the closure of the Binns Road factory, and the takeover of the trademarks and some of the products by a succession of other firms.

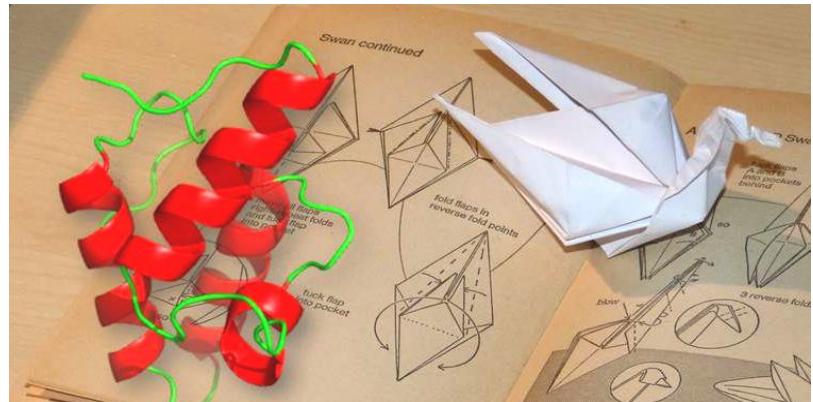
Perhaps the most impressive part of the evening was the extensive display of Meccano models, Hornby trains and Dinky toys, which filled tables stretching from one side of the room to the other. These included Hornby's 'flagship' model - a magnificent example of the Gauge O electric locomotive 'Princess Elizabeth', introduced in 1937 when it cost five guineas. Jim deserves our thanks for his efforts in compiling the talk and bringing such a wide range of exhibits, which were greatly appreciated by the capacity audience.

Peter Evennett

Protein Folding: Nature's Origami – Sheena Radford

20 March 2014

Proteins are the stuff of life. As their name implies, they are of prime importance. They compose most of the structural material in living systems and the vast majority of the ‘working molecules’ which control the complex pattern of metabolic pathways. The other families of biomolecules are largely ancillary – DNA stores the instructions for making proteins and the other bits and pieces of polysaccharide and lipid occur mostly as cell membranes, exoskeletons and energy stores.



The shape of protein molecules is all-important and one of their most remarkable properties is the way in which they are able to structure themselves. This lecture concerned the way in which a flexible, linear chain of amino acids is able to form a protein molecule with a precisely defined three-dimensional structure. The system which Nature has evolved produces protein sequences that are able to self-order into beautiful, elaborate, functional structures. And furthermore, they do this rapidly and (usually) reliably, in a way which makes them the envy of any engineer. However, in spite of intensive studies over the last two or three decades, the rules which govern this process remain a mystery.

This process is known to biochemists as *folding*. A major feature of this lecture was the development of an elegant analogy between protein folding and origami. One must always be careful not to push analogies too far — and there is a clear distinction between folding a two-dimensional sheet of paper and manipulating a one-dimensional molecular chain — but it nicely illustrates the level of complexity of the process. Professor Radford gave examples of paper origami and produced hand-out sheets of origami figures that had been unfolded, challenging us to work out what the folded shape had been from the pattern of creases.

The folding of proteins involves a sequence of operations which we can outline. Firstly, the chain coils into lengths of helix or zigzags backwards and forwards to produce sheets. These units then settle into a three-dimensional arrangement and cross-links develop, stabilising the structure. However, modelling in more detail has proved elusive and we are not yet able to predict the structure of the final protein from a knowledge of the sequence of amino acids along the chain.

Whilst this academic problem is fascinating in its own right, it is now clear that the rare instances where the process goes wrong have dire consequences. Errors of protein folding are the underlying cause of many human disorders that threaten the health of our ageing population, such as Alzheimer’s and Parkinson’s diseases. The challenge before us is to crack the folding code and develop strategies to counter the process going wrong. The misfolded protein often forms amyloid deposits. Interestingly, these have the ‘cross-beta’ structure which was first found in biological material in the 1960s (in the egg stalks of lacewing flies) by Ken Rudall, Keith Parker and Sandy Geddes, working in the unit which became the Astbury department of Biophysics in Leeds.

This was a showpiece ‘popular’ science lecture. The presentation was highly visual and an interesting problem was explained in terms of a comprehensible analogy (to avoid dealing with unfamiliar background material and terminology). There was a small hands-on task for the audience and a conclusion which stressed the profound importance of the subject.

John Lydon

Atkinson Grimshaw Revealed

10th April 2014

Why revealed? Well, the position of Atkinson Grimshaw’s burial was *revealed*, a plaque to commemorate this was *revealed* at an official unveiling, and last, but not least, we were privileged to hear a most illuminating lecture on our most famous ‘local’ artist which *revealed* bibliographical detail of immense interest, delivered in a most engaging manner. The proceedings commenced with the unveiling by the artist’s two great grand-daughters, Mary Ferriss and April Marsden, of a suitably inscribed blue plaque to John Atkinson Grimshaw (1836-1893), the ‘celebrated painter of city and harbour scenes in moonlight’. The plaque, positioned in the wall of the old chapel in the centre of St George’s Fields (formerly the Leeds General Cemetery opened in 1835) within the



University of Leeds campus, was commissioned by the Leeds Philosophical and Literary Society, which had sponsored Atkinson Grimshaw when he was a young unknown artist. Here the long overdue memorial to him rests in a delightful landscaped urban oasis not far from his burial place which, although no longer marked, has been traced from cemetery plans – and our immediate past President, on this special occasion, acted as marker. We then proceeded to the University’s Stanley and Audrey Burton Gallery to view a mini-exhibition, which included an Atkinson Grimshaw watercolour on loan from Leeds City Art Gallery, newly purchased

with the aid of a grant from the Society (see *Annual Review* 2013, pp. 35-36, where a photograph is also included), and to attend a reception where we were warmly welcomed by the University Vice-Chancellor, Sir Alan Langlands. Revived by a hot drink after a further walk to the School of Music, 60 of us sat down to an excellent talk by Eveleigh Bradford entitled *John Atkinson Grimshaw: ‘Our Talented Townsman’*, the applause and questions reflecting the audience’s appreciation. We are indeed grateful to all those who made this most enjoyable event possible, not only on the night but also by initiating this project and seeing it through to fruition.

Mark Seaward

The Vale of York Hoard in its Viking Context – Joyce Hill

22 May 2014

The Vale of York Hoard was discovered in 2007 by metal detectorists who were exploring a farmer’s field near Harrogate. It consists of 617 silver coins and 68 other items all very tightly packed and all very carefully packed into a beautifully decorated Carolingian silver-gilt cup which was probably made in the mid-ninth century in either France or Germany as a ciborium (a vessel for

holding the communion host). The coins are remarkably diverse, coming from both Viking and Anglo Saxon England, from other parts of Continental Europe, and from the Islamic world, and even from as far afield as present day Afghanistan. They provide a graphic illustration of the extent and complexity of Viking trading links at the time. However, the fact that the collection is so diverse presumably means that the coins were treasured more for their silver content than in terms of their ‘face value’. This is even more obviously true for the ingots, the hack-silver and the ring-money (silver rings made to set weights for trading purposes). The argument is reinforced by the fact that the brooches and other silver items included in the hoard are cut, bent or otherwise damaged although there is one gold item in the otherwise entirely silver content which is intact. This is an arm-ring typical of the Viking-controlled area around the Irish Sea.

As indicated by the title of the lecture the context in which the hoard was collected and buried is all-important. Undoubtedly it was buried by a wealthy Viking and the date at which the last of the coins was minted suggests that it was hidden shortly after 927, when the Anglo Saxon king, Athelstan reconquered the Viking North, and issued coin proclaiming himself to be king of all Britain. It was a time when one of Viking descent would probably have felt quite insecure and would have felt the need to hide and protect ‘what was his’.

As we have come to expect, the talk by our President, Professor Joyce Hill, succeeded in providing both information and entertainment in equal measure and it was particularly timely since the Vale of York Hoard was one of the ‘star’ exhibits in the 2014 British Museum’s ‘Vikings’ exhibition in London.

Richard Bushby

Natural Tissue Scaffolds: Off the Shelf Tissue Transplants

19 June 2014

In a remarkable lecture, Professor Eileen Ingham gave us a glimpse of the new age in medicine which is about to dawn. Over recent decades the techniques of organ replacement have been developed to the extent that (with the exception of the brain) virtually every organ can be transplanted. However, the major problem lies not with limitations to the art of the surgeon, but with the immune system of the body which has evolved to distinguish self from non-self – and which attempts to reject any alien material. Present methods of overcoming this problem include the use of drugs to suppress the entire immune system - but this clumsy sledge hammer approach places the patient in a very vulnerable position, with no defence against infection. Clearly, what is needed is some way of producing organs for implantation which the body does not recognise as being alien, and will therefore not attempt to reject.

Eileen Ingham is Professor of Medical Immunology at the University of Leeds. She leads a team which is developing a technique helping to make this a feasible possibility. It makes use of the fact that in higher animals and humans, the same kind of structural protein is used as a natural framework for all bodily organs. This material is collagen. In biochemical terms, it has relatively simple structure and if all cellular material is washed from it, material taken from an animal source is not rejected by a human host. This scaffolding can then be injected with stem cells from the host so that, in effect, patients can grow their own replacement organs. In recent years, Professor Ingham has developed techniques for producing cell-free collagen scaffolds for cardiovascular tissue and musculoskeletal soft tissue replacement.

This work is part of a massive international programme in collaboration with Departments of Vascular, Orthopaedic and Paediatric Cardiac, Surgery and Rheumatology at Leeds and laboratories in Bradford, Bristol, Curitiba (Brazil) and Iowa (USA). The Society is very pleased to hear that, Professor Ingham has been awarded the top award for Innovation and Entrepreneurship in Academia and Research, sponsored by the Science and Technology Facilities Council.

John Lydon

Summer visit to Quarry Bank Mill and Jodrell Bank

18 July 2014

On one of the hottest days of the year — though fortunately without any of the sudden thunderstorms that were threatened — members enjoyed a day out at Quarry Bank Mill and Jodrell Bank. A morning of social and industrial history followed by an afternoon of science and technology exemplified the Society's characteristic breadth of interest. Quarry Bank cotton spinning mill is situated in a narrow valley on the River Bollin which provided the original water-driven power. The massive water wheel that is now installed has been brought from elsewhere, but its size, which is rather less than that of Quarry Bank's original, is extraordinarily impressive. Displays explain how the water-power was successively improved and then replaced by steam. Cotton

spinning machinery is also on display, with some live demonstrations, and there are very informative galleries setting out the history of the industrialisation of cotton cloth production, and of the family of Samuel Greg, who was the mill's founder in 1784. The family lived, as was common at the time, in a large house right beside the main factory building. Gladstone visited on one occasion and made the telling comment that 'They have a very pretty place at Quarry Bank.....Were it not for the noise and smell of a cotton factory, the residence would appear an extremely pleasant one'. The mill closed in 1959, one year after Britain, for the first time, imported more cotton goods than it sent overseas.



Quarry Bank, in its heyday, was a world-leader; the same is true of Jodrell Bank. When the Lovell telescope (named after the Observatory's founder) was built in 1957, it was the largest in the world, and was the only instrument capable of tracking Sputnik's carrier rocket when this Soviet satellite launched the Space Age later that same year. It is still the world's third largest steerable telescope, and it has the extraordinary distinction of being classified as a Grade I listed building while at the same time carrying out research at the forefront of science. Another telescope within the complex, the Mark 2, was also a world-leader when it was built in 1964, being the first to be controlled by computer. Nowadays the Lovell and Mark 2 telescopes are linked with five others around the UK to create a virtual disk 215 kms across; and this collaboration, known as the e-MERLIN project, is in turn linked to telescopes across Europe and beyond, keeping Jodrell Bank at the cutting edge of radio astronomy — and this notwithstanding the fact that the life of the Lovell Telescope was originally estimated to be around 15 years. As a measure of its size, one of the information boards stated that it is the same height as 21 double-decker buses stacked on top of one another, and that 168 double-decker buses could be fitted into the telescope's bowl.

Joyce Hill

Natural History Roadshow

6 September 2014

This event at the Discovery Centre was organised and run jointly with the Leeds City Museum Service and repeated the roadshow-format which we ran for members in 2013. However, this year the Roadshow was held on a Saturday morning with the hope that it would also attract those family groups that are normally involved in events at the Discovery Centre on Saturday mornings. As last year, the staff had prepared an interesting series of displays. Although we failed to attract the target family groups, this year's Roadshow did provide another opportunity for Society members to visit the Discovery Centre, to bring along objects for identification by the Museum's specialist Curators and to explore the environmentally controlled store which contains all the things for which the City Museums have no room to exhibit at any one time. This is always a worthwhile exercise and every time one visits the store there are new things to discover, from dodo bones to old television sets to collections of hats, of butterflies, of bird skins and of everything in between. The sheer amount and diversity of the objects gives one a real insight into the daunting task that the Museum staff faces in terms of cataloguing, conserving and studying the collections. If you have never visited the Discovery Centre it is highly recommended and it can always be done privately (by prior arrangement) but, as a Society, it is unlikely that this exercise will be repeated in future years. As last year, the Roadshow was much enjoyed and appreciated by those who came but regrettably the numbers involved barely justified the effort involved.

Richard Bushby

Woodbine Willie: Unsung Hero of World War I – Bob Holman

23 September 2014

2014 is a year of commemoration for the First World War. The Society's recognition of this anniversary took the form of a lecture on Geoffrey Studdert Kennedy, a Leeds man by birth, who was popularly known to the troops as 'Woodbine Willie'. Our speaker was Bob Holman, whose book on Woodbine Willie, bearing the same title as the lecture, was published last year. He was able to bring the man alive for us, since his research for the book had included not only surviving documentary material and Studdert Kennedy's own publications, but also interviews with those who had known him.

Studdert Kennedy was the seventh of nine children, whose father was an Anglican priest serving in one of the more deprived areas of Leeds. This commitment to the poor and the oppressed was very much part of the son's life too. After an education at Leeds Grammar School and Trinity College Dublin, where he read Classics and Divinity, he entered the church and, after a curacy in Rugby, became the vicar of one of the poor areas in Worcester. At the outbreak of war he volunteered as an army chaplain, and when eventually he was sent to the Western Front, he became a popular and accessible figure, famed for handing out packets of Woodbine cigarettes along with his spiritual aid. In 1917 he was awarded the Military Cross for assisting the wounded in No Man's Land. He began the war with a positive outlook on the need to fight, giving morale boosting speeches to the men in training, but his attitude changed as the years went by and by the end he had become a Christian socialist and a pacifist, finding expression for his somewhat radical views in a series of publications and collections of verse, all of which sold extremely well.

He was generous to a fault (he clearly had a very understanding and supportive wife and children), and he was in great demand as a preacher, within his own parish in Lombard Street in London, and for the Industrial Christian Fellowship, on whose behalf he undertook several preaching tours of Britain. It was on one of these tours that he died in 1929 at the early age of 46. His reputation was such that King George V sent a telegram of condolence to his family. The Dean of Westminster, however, resisted pressure for him to be buried in Westminster Abbey on the grounds that he was ‘common and uncouth’, which, it has to be said, reveals more about the Dean than about Studdert Kennedy. Much more telling was the fact that thousands of ex-servicemen turned out for his funeral, and the story goes that many of them threw Woodbine cigarette packets onto the hearse.

Joyce Hill

An Evening with Mike Green

16 October 2014

The guest for this year’s ‘Evening with’ was Professor Mike Green, retired Professor of Forensic Pathology at the University of Sheffield. The evening began with a most enjoyable meal in University House, which many of us agreed exceeded even their usual high standard.

Mike Green is well known as a lively speaker with a distinctive style, and once again he didn’t disappoint. His topic was Berkeley George Andrew Moynihan, the surgeon who later became the first Baron Moynihan of Leeds for his distinguished work in the First World War and at Leeds General Infirmary. From poor Irish ancestry, the Moynihan family rose to distinction: Berkeley’s father Andrew was awarded the Victoria Cross for his gallantry in the Crimean War, though he died in Malta shortly after Berkeley’s birth. His widow settled in Leeds, where the young boy went to school. He then studied at Leeds Medical School, and went on to spend much of his career in Leeds, becoming Professor of Surgery. His distinction principally comes from his work at the Military Hospital at Beckett Park during World War I, when he developed pioneering operations on soldiers with serious abdominal wounds. At this time it was conventional to close wounds early, which led to what Mike graphically described as a ‘pus poultice’ with an extremely poor prognosis. Moynihan’s technique was to keep wounds open and cleansed.

Moynihan frequently visited America and he encouraged the sharing of knowledge and techniques. It seems incredible nowadays that it was only at such a relatively late date in the history of medicine, the beginning of the 20th century, that Moynihan introduced the use of rubber gloves and the wearing of sterile clothing when performing operations; until then many surgeons operated wearing their street clothes.

Moynihan bought the Carr Manor estate on Stonegate Road, Leeds, where he lived for twenty years. He brought much distinction to the Leeds Medical School, yet was forced to retire while still in his prime by the ‘20-year rule’ governing the length of tenure of Professors at Leeds. In ‘retirement’ he operated in nursing homes in Leeds and London, and continued to practise in Park Square.

I had no special interest in or knowledge of Moynihan before this event, but Mike Green’s entertaining talk provided an intriguing insight into the life of an important character in the history of Leeds and its Medical School.

Peter Evennett

The Priestley Lecture

James Watt, Engineer and Polymath – Ben Russell

20 November 2014

One of the first things that visitors to Leeds arriving by train will see as they emerge from railway station is the statue of James Watt. It is an impressive figure with the head slightly bowed in thought. The rugged greatcoat, the sheaf of plans in one hand and the pair of dividers in the other, mark his trade as an engineer.

Ben Russell charted the life of James Watt, from the sickly child in Scotland, to the overworked apprentice in London, to his work at Glasgow University as an instrument maker, then to the grimly persistent inventor, to his partnership with Matthew Boulton, the slow achievement of success, the factories in Leeds and Birmingham and ending with universal acclaim in his later years.

He highlighted three of Watt's most important inventions. The first of these was the introduction of a separate condenser to the old atmospheric engine designed by Newcomen. This raised its efficiency by a factor of four, transforming the clumsy mine-pump into the machine which would power the factories and mills of the Industrial Revolution. The second was the sun and planet gearing, a clever device to side-step the existing patent on the crank for converting the reciprocating, back-and-forth movement of a piston into the rotation of a shaft. The third invention, was the one of which Watt was most proud, namely the ingenious 'parallel linkage', a device which made a double-acting cylinder (where the energy in both the forward and backward strokes is used).

These were more than enough to secure Watt's place in history — and it is perhaps not surprising that, by comparison, his other achievements appear trivial and are largely overlooked. One of the treasures of the Science Museum is James Watt's Birmingham workshop. In 1924, the museum acquired the complete contents, which had been preserved in its entirety as an industrial shrine since Watt's death in 1819. Surprisingly few items remain which relate to his work on the steam engine: instead, it is filled with jars of chemicals, ceramics, a three-dimensional pantograph for copying sculptures, pieces of scientific equipment and musical instruments. Watt was very much a man of his age — and his multi-faceted life reflects the revolution in science and manufacturing which occurred during the Industrial Revolution. He was a member of the Birmingham Lunar Society, he had independently discovered the concept of latent heat and he could more than hold his own in the company of Joseph Priestley, Erasmus Darwin, Samuel Galton and Josiah Wedgwood.

But there was a dark, dishonest and ruthless side to Watt's character, which came as a surprise to many in the audience. One apparently insignificant object found in his workshop was particularly telling. This was a metal stamp bearing the name *le Ton*. The presence of this puzzling object appears to have only one possible explanation. Louis le Ton was regarded as the Stradivarius of flute makers in France in the mid-nineteenth century and his instruments commanded high prices. One of Watt's many side-lines was the manufacture of flutes (and specialist tools he designed to facilitate their manufacture were also found in his workshop). The inference is that James Watt used the punch to mark his own flutes and sell them as valuable le Ton instruments.

Whether or not this is true, there is no doubt that his business dealings with Matthew Boulton were less than honourable. Boulton was a rival of Watt in Leeds, being able to produce superior engines, mainly because of the better fit of the pistons in the cylinders. Watt's attempts to outflank Boulton and steal his manufacturing secrets were unscrupulous in the extreme. He bought up property adjacent to Boulton's factory in Hunslet to prevent him from expanding his works, he spied on

Boulton's activities, attempted to bribe his workmen for information and even staged a burglary to obtain engine plans from the lodgings of one of his foremen. It is no wonder that there were objections to Watt's statue being erected in City Square.

Ben Russell's lecture was an elegant eye-opener for many in his audience. His portrayal of this complex man showed him to be far more than the engineer who improved the steam engine, but also a polymath, a visionary of the Industrial Revolution, a gifted inventor, and a scientist of the first order — and no saint.

John Lydon

Editor's note: As is customary, the Society joined with the Leeds Library for the annual Priestley lecture, which was as usual held in Mill Hill Unitarian Chapel. The present building was erected in Victorian times on the site of an earlier chapel where Priestley had been a minister from 1767 to 1773. Ben Russell, who delivered the lecture this year, is Curator of the Engineering Collection at the Science Museum in London.

AGM dinner and talk - The Haunted Castle: a Photographic Tour of Cliffe Castle, Keighley – Daru Rooke

4 December 2014

With his customary brio, Daru Rooke, of Bradford Museums and Galleries, took his audience on a tour of Cliffe Castle based on a series of photographs taken of the house in its Victorian heyday. Daru Rooke is one of those speakers who could make a talk on vacuum cleaners sound enthralling, and he certainly did not disappoint on this occasion.

In 1848 the Butterfields, worsted manufacturers, bought Cliff Hall, a small neo-Jacobean manor house built in the 1820s. When, in 1874, Henry Isaac Butterfield inherited the property, he embarked on a building programme which transformed the hall into a Gothic Revival fantasy with tall battlemented towers, and he renamed the house Cliffe Castle. In the 1950s, when in the stewardship of Keighley Corporation, one of the towers was demolished, another was reduced in height and the top storey of the main range was removed. Despite these depredations, the building remains impressive.

Henry Isaac Butterfield lived much of his life abroad, firstly in the USA and later in France. The family had developed an extensive export trade with America, and it was here in 1854 that he married Mary Roosevelt Burke, a relative of Theodore Roosevelt. Henry was 35, Mary only 16. The couple mainly resided in Paris where Henry's wealth and Mary's beauty earned them a prominent position in court circles, converting the couple into ardent francophiles. Although the exterior of Cliffe Castle affirms the British attachment to romantic medievalism, with the exception of the vestibule its interiors reflect the Butterfields' Parisian experiences.

The staircase hall showcased Gothic Revivalist taste with its hammerbeam roof, marble pillars and stained glass landing window designed by Powell Brothers of Leeds. The main reception rooms were decorated in the French style, hung with glowing silk, adorned with gilded and upholstered furniture and lit by vast glass chandeliers, all by the Parisian interior designer, Gramond, and with ceilings painted by Leroux. Life-sized portraits of Napoleon and his Empress hung in the drawing room.

Daru Rooke has presided over a major restoration of Cliffe Castle's historic interiors. The grand chandeliers and stained glass have been restored, walls have been repainted, curtain hangings rewoven and three thousand sheets of gold leaf employed to present the rooms in all their Victorian splendour. In 1950 Cliffe Castle belonged to a Butterfield descendant, Countess Manvers who removed choice pieces of furniture and paintings to her home, Thoresby Hall in Nottinghamshire, whilst the rest of the contents were sold at a three-day auction. The search is now on to trace the whereabouts of these items. In what must have seemed like a dream come true, Daru Rooke came upon Cliffe Castle's portrait of Queen Victoria in a Nottingham Antiques Centre.

What must have been heart-warming to Daru Rooke, was that many of his audience had visited Cliffe Castle but if, like me, this was many years ago, his talk certainly inspired one to renew one's acquaintance with this remarkable building; those who had not visited were certainly intrigued, and immediately began to talk about planning a visit.

Janet Douglas



Reports received during 2014 on Grants awarded by the Society

A Composition by James Macmillan

£1000 to the Leeds Festival Chorus for a commission from James Macmillan for a new work to mark the centenary of the First World War

Leeds Festival Chorus, with the Royal Liverpool Philharmonic Orchestra, performed the world premiere of ‘Deus Noster Refugium’ in Leeds Town Hall on Saturday 29 March 2014.

The Chorus commissioned the piece from Scottish composer James MacMillan to mark the centenary year of the start of the Great War. MacMillan specialises in modern sacred music rooted in evocative biblical imagery, but also writes for opera, ballet, musical theatre and choirs. In this case, he has taken Psalm 46 (God is our refuge and strength) as his inspiration. The objective on this occasion was to continue the long tradition of marking armed conflicts with concerts of classical music and to provide something new and significant for the audience.

The programme included Mozart’s Masonic Funeral Music, Haydn’s Symphony No 44 and Haydn’s Mass in Time of War. Conducted by Simon Wright, the soloists were Mary Bevan (soprano), Jennifer Johnston (mezzo), Robin Tritschler (tenor) and Neal Davies (bass)

The concert was very well received by the audience. In his *Yorkshire Post* review, Chris Robins described the performance as ‘electrifying’, continuing ‘This setting of the Psalm God is our Hope and Strength was a vivid interpretation of the poem, pointing its drama and passion. Leeds Festival Chorus were unsurpassable in tuning, balance, projection and forward motion. Their special ‘signature’ tone, a marriage of hard surface with inner sonority, was magical’.

Richard Wilcocks

Gawain and the Green Knight

£1000 to the Alive and Kicking Theatre Company for the realisation of a drama and creative writing project in schools

Gawain And The Green Knight, our first show in 2013-14, was a great success. *Gawain* develops literacy skills in upper KS2. It leads from drama through speaking and listening directly to writing.

Teachers from St Patrick’s Primary, Burmantofts, told us: ‘Your dramatisation captured the children’s imagination. You brought a story to life acting out roles and engaging the children in the times of the story. We learned to use drama as a teaching tool to engage children in their writing. The children’s imagination and ideas developed by using the story’s prompts. The children worked really hard identifying different points of view, enhancing their empathy skills, and constantly interpreting and analysing what the characters do, think and feel’.

On her visit to Holy Family Primary, Joyce Hill, President of the Society and a specialist in medieval literature, saw that our version of *Gawain* has aimed to remain true to the medieval storyteller. A strange figure, the Green Knight, pays an unexpected visit to King Arthur’s court. He challenges the Knights to a beheading match. Gawain strikes the first blow only to find the Green Knight picking up his head and putting it back on his neck. All the original adventure is there with the addition of a new perspective, that of his squire, a girl the same age as Gawain. The missing

story elements of the original poem are re-created and developed by the children themselves, almost without them realising it.

Our Creative Co-Director, Martin Riley, rewrote his version, developing it and taking direction from the working notes of our earlier productions. *Gawain* provided a superb opportunity for Luke Dickson and Kathryn Hanke to develop working together delivering the narrative of *Gawain* and drawing in the children and staff as they become decision-makers, story-makers, writers and tellers.

We offered two versions: a two-day visit and an extended version supplemented by three workshops delivered by John Mee and Martin Riley. The two-day version played to 16 groups and the extended version played to 6 groups. Together the two versions played to 660 children and 40 teachers. *Gawain* visited 22 separate classes in 13 schools in Leeds, Wetherby and York, and it has been booked for a 2014 Summer School at Eckington High School, Sheffield, where the show is part of the welcoming events for the new year seven students.

Teachers reported on learning outcomes using drama as a teaching and learning strategy: engaging children with writing; taking on roles that enhanced empathy levels; handling an art form; and functioning as a learning medium.

Gawain will remain in our portfolio. The resource pack by Andrew Wilkinson from Farsley Farfield Primary continues to impress.

John Mee

Together Through Play Project

£1000 to deliver a multi-sensory, switch-accessible computer system to facilitate meaningful play between disabled and non-disabled children at events in Leeds.

At ‘Breeze on Tour’ at Roundhay Park on 6th August 2014, the children and young people of Leeds enjoyed playing ‘Button Bash’ – a co-operative, switch-based game developed at the University of Leeds. This event coincided with Playday, the National day of Play. ‘Button Bash’ is a product of the University’s ‘Together Through Play’ research project, which develops toys and games that encourage disabled and non-disabled children to play together. The project was undertaken by Dr Raymond Holt (School of Mechanical Engineering); Dr Angharad Beckett (School of Sociology and Social Policy); and PhD Researcher, Anne-Marie Moore (School of Mechanical Engineering). Participating children were encouraged to develop ideas for new games, which were refined and prototyped by the University and taken back for the children to try out. ‘Button Bash’ was one of the outcomes. Designed to be played with accessibility switches, the aim of the game is for teams of children to ‘steer’ characters through the maze-like game. The game is designed to encourage a spirit of teamwork and collaboration, and to include players with significant motor impairments.

Funds provided by the Leeds Philosophical and Literary Society enabled the team to bring the ‘Button Bash’ game to Breeze on Tour. The total expenditure on the Day of Play was over £1000. Excess costs were covered by the University of Leeds. All of the kit developed for Playday 2014 is reusable, and will be reused in future. The funds awarded have thus enabled future events of this kind to take place, rather than simply supporting a one-off or stand-alone event.

The kit was used to promote student achievements at New Designers, London, 25th-28th June and 2nd-5th July 2014, and the Breeze Fly Market event, 11th January 2014. It has, therefore, had a wider reach, beyond the Playday event itself. In fact, with hindsight, Breeze events designed to include relaxed opening hours would have been preferable showcasing opportunities, as they allow for greater involvement of disabled children. The team had, however, already committed to hosting their event on Playday, and dates and times for relaxed opening hours were released at a later date. Tapping into Playday did, however, bring publicity that we may otherwise have missed out on, helping to raise the profile of inclusive design projects with children, in the local area.

Anne-Marie Moore

Entomology Cabinet

£750 towards the purchase of a specialist cabinet by the Leeds City Museums

Leeds Museums and Galleries was privileged to receive a grant from the Leeds Philosophical and Literary Society of £750. This allowed us to buy a second-hand ‘Hill’ entomology cabinet from the Natural History Museum in London. The NHM have been transferring all their entomology collections into the purpose-built, purpose-fitted ‘Darwin Centre 2’ and subsequently have surplus cabinets. These cabinets are well known for their quality and, brand new, cost well over £1,000 each.

The entomology collection at Leeds is stored in a variety of cabinets – acquired with entomology collections over the years and of varying quality. We are working to improve this hotch-potch system by acquiring standard-sized entomology cabinets ('Hill' cabinets) and decanting the collections into them in appropriate taxonomic order. At present most of the British butterflies, micromoths, Odonata, Hymenoptera, Coleoptera and Hemiptera are housed within this system but we have a fair way to go before the entire collection is ordered.

The cabinet purchased by this grant has been used to store our parasitic wasp collection – currently being worked on by volunteer Bill Ely. Bill has sorted, identified and ordered the collection and the new cabinet is a perfect home for this newly-curated collection. This collection – the Ichneumonidae – ranges from large specimens with spectacular ovipositors to the diminutive parasites of aphids.

The addition of this cabinet to our stores will increase the access to Leeds’s Ichneumonidae collection and improve the storage conditions considerably. The Society will therefore be thanked by many current and future curators and researchers for their help with this project. The Society’s input into this project will of course be acknowledged where possible, and we will ensure that the cabinet is suitably labelled.

Clare Brown

Diocese of Leeds Schools Singing Programme

£1000 towards the purchase of new music

The Diocese of Leeds has the largest church programme of choral music for children and young people in the UK. The programme currently offers 2,500 children access to high quality weekly

singing sessions. Our Schools Singing Programme sees us run a total of 45 school choirs, working in some of the most deprived areas of West Yorkshire. 15 of these schools are in Leeds itself. Our professional choral directors lead the inclusive development and training choirs in schools, supporting opportunities for talented young singers to audition for one of our six boys' choirs or six girls' choirs, who rehearse weekly after school and regularly perform at Leeds Cathedral, in broadcasts for the BBC, in national competitions and in other prestigious venues.

A grant of £1,000 from the Leeds Philosophical and literary Society enabled us to purchase new music to expand the repertoire of our work in schools and our youth choirs, providing sheet music for the hundreds of children we work with. Introducing new pieces in this way ensures that all of the children and young people we work with (including reluctant singers) remain engaged through a repertoire that is diverse, fun, relevant and musically challenging.

Benjamin Saunders

The Follies of Youth

£750 towards a community project on the lost Japanese Garden of Otley, co-funding with Arts Council England and The European Culture Fund

The Follies of Youth made an initial research trip to the site of Otley's former Japanese garden in February 2014. Garden conservationist Liz Simson (Yorkshire Gardens Trust) introduced the group to the archive of the Japanese garden held in the Otley Museum. In a follow-up meeting, The Follies of Youth started planning a public event with the following aims: firstly, to highlight the history of the garden site (now a wasteland) and the status of Otley Museum (currently homeless); secondly to reengage the Otley community with the cultural exchange, between Yorkshire and Japan, that took place over 100 years ago.

An intensive period of research began in March 2014. The Follies of Youth made trips to other lost and conserved heritage gardens with Patrick Eyres (New Arcadian Journal), Karen Lynch (Yorkshire Gardens Trust) and John Phibbs (Debois Landscape Survey Group). This included a trip to Wentworth Castle, which had its own version of an oriental garden in the eighteenth century. Searching for specialists in the field of Japanese gardens, The Follies of Youth made contact with Jill Ragget (Writtle College) and Graham Hardman (The Japanese Society). It became clear how the symbolism of the Japanese garden has been historically misinterpreted by English society; to the extent that a joke was made of the *faux-naif* Japanese garden in a 1913 article in the *Yorkshire Evening Post*, located by The Follies of Youth in The British Newspaper Archive and subsequently used in the event publicity. In addition to consulting with garden historians and conservationist, the group met with Otley Action for Older People, but only a couple of members could recall the lost Japanese Garden and Recreation Hall on Burras Lane. The group obtained permission from the current owners, Crossley Evans, to hold a performance on the site of the former garden. They also made arrangements for a series of presentations to take place at the neighbouring All Saints Parish Church.

The Follies of Youth produced a public event that celebrated the history of Otley on 27 May 2014. The programme included PowerPoint presentations by Stuart Pickersgill (Otley Museum), with focus on the archive of the Japanese garden, and Graham Hardman, with focus on Britain's fascination with and misconception of Japanese garden design. The Follies of Youth invited sound artist Ryoko Akama (The University of Huddersfield) to perform a new composition drawn from

her PhD on Japanese aesthetics and the site of the church including its 19th century organ. Artist Harold Offeh (Leeds Metropolitan University) collaborated with the group on a performance that animated the different elements of the Japanese Garden. An ad-hoc brass band accompanied a processional walk from the church to the garden site in a way that demonstrated a unique blending of Yorkshire and Japanese cultures. Liz Simson closed the event with a short talk about the map she produced of the Japanese garden and plans to excavate the site in the 1990s.

Linzi Saunders

Bridge Street – A new musical celebrating Leeds's Jewish history

£1030 towards the staging costs

The Sinai Players was formed in 2004 as a subsidiary group within Sinai Synagogue, Leeds, with the purpose of providing a forum for social interaction, cohesion, outreach, and personal development through the medium of amateur dramatic participation. Although associated with a Jewish religious organisation, it is open to anyone who wishes to participate.

2014 marks the 70th anniversary of the synagogue, and as part of the celebrations for the year, the Sinai Players commissioned distinguished dramatist (and synagogue member) Vanessa Rosenthal, and Leeds University composer Ian Sapiro, to write a new musical, entitled *Bridge Street*, which draws upon local archival and oral history materials to explore the city's early Jewish community. *Bridge Street* touches upon a number of issues that still resonate today: immigration and the problems of integration and language, social exclusion, political positioning regarding the acceptance of immigrants, racism and prejudice, as well as universal themes of love, familial conflict and separation.

Act 1 of the musical was staged at the Carriageworks Theatre as part of the JFest International on 29 & 30 June 2014. The audience over the two nights was 435, with a sell-out performance on the second night. We intend to do several "concert" performances at a local care home and some schools in the near future, and to perform both Acts at next year's Festival.

Dolf A Mogendorff

The Magic Flute

£1500 to Young Opera Venture, towards production costs

YOV is happy to report that, with the support of the Leeds Philosophical and Literary Society, the Arts Council and other donors, we successfully completed our nine-venue opera tour of Mozart's *The Magic Flute* this autumn. The production was a great success!

We believe that all people deserve broad cultural choices and that opera is something that can be shared by everyone. As such, we prioritised visiting local theatres in areas where affordable, professional and exceptional opera has seldom been performed before. Of our performance in Chesterfield, the *Yorkshire Post* said: 'Here's a Magic Flute that lives up to its name and gives the lie to those who lazily condemn opera as elitist. The venues may be modest, the orchestra small and ticket prices low, but the standard of performance reaches the rafters'.

Our prize winning, professional young singers and orchestra members worked diligently to ensure the quality of this production. Whilst we are confident that this is YOV's best work to date, it has been a sad and challenging few months for the company as our founder, friend and Artistic Director, Jane Anthony, became terminally ill during the rehearsal phase of the project. Despite these circumstances, Jane recruited a strong team to move forward in her absence and tenaciously continued to fly the flag for YOV throughout her illness.

Jane was present at the opening night of The Magic Flute on 13th September but passed away on 6th November. It was her wish that the work that began when she founded YOV - taking excellent core operatic experience to ordinary people in their own localities and providing early, mentored career experience for young professional singers - should continue in her absence. We intend that it will. With the support of friends and donors like the Leeds Philosophical and Literary Society our continued success will be her legacy.

Kate Frusher

Otley Festival Family Science Fair

£480 for organisational costs

Otley Science Festival Science Fair was a resounding success this year, with over 500 people attending, most of them children, accompanied by willing adults.

There was an exciting and inspirational mix of stalls and activities. The following organisations were represented:- The Institute of Mechanical Engineers, Thackray Medical Museum, Leeds Institute of Physics, The British Ornithological Trust, The British Science Association, the York Centre for Immunology and Infection, Leeds Industrial Museum, Ashfield Primary School, The Institute of Mechanical and Biological Engineering, Otley Amateur Radio, the Institution of Civic engineers, the Institution of Engineering and Technology, Yorkshire Electronic, Bring History Alive and the University of Keele 'Molykool'.

Activities took place in nearly every part of Otley Courthouse, including the outside courtyard. Children were able to use soldering equipment, to build and race 'balloon' driven cars, to build weight-bearing structures and watch 3D printers at work. 'Bring History Alive' introduced visitors to alchemy, with the actors in full costume.

For photographs please see the website www.otleysciencefestival.co.uk and follow the flickr link for more pictures.

The Otley Science Festival committee are very grateful indeed for the support of the Society for this event, which is the highlight of the week for many local children, who attend every year and are eagerly looking forward to 2015!

Hazel Costello

Geoffrey Studdert Kennedy
(known as Woodbine Willie)
was the subject of
a lecture by Bob Holman
in September 2014



Geoffrey Studdert Kennedy
(Woodbine Willie)
Priest and Poet
born Leeds 1883