

# **NO RULES, NO MINUTES!**

A RECORD OF THE  
BRISTOL SCIENTIFIC CLUB

By

RAYMOND HOLLAND

November 2002

Updated Feb 2010 J S Littler

## ACKNOWLEDGEMENTS

In undertaking this project I have made extensive use of the early editions of the Journal of the Society of Chemical Industry and Sir William A Tilden's book 'Sir William Ramsay KCB, FRS Memorials of his life and work'. Published by MacMillan in 1918.

I should like to record special thanks to:

Beryl Corner, one of the original lady members and the first lady to present a subject for discussion, for her memories of the first ladies elected to membership and of other Club members over her long membership.

Aitken Couper, a former Secretary Bristol Scientific Club, for his valuable advice, and the documentation covering the admission of ladies to membership.

Anne Hollowell, Hon Librarian Bristol Naturalists Society, for allowing me access to the records of the Bristol Naturalists Society and for her help in providing copies of BNS records of the period immediately before and after 1886.

John Littler, currently Senior Secretary Bristol Scientific Club, for inviting me to undertake this challenging project, giving me access to all the available Club records and for giving me his invaluable advice and support leading to the publication of this record.

I would welcome the correction of my errors and inconsistencies together with any additional information that should be included in the Club's archives.

I hope that my efforts will encourage others to pad out these 'bare bones' in the future, for example, there must be much that could be written about the individual members.

Raymond Holland  
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## INTRODUCTION

My first introduction to the Bristol Scientific Club was when John Littler invited me to attend the meeting held on 21 November 1987 as his guest. It was an evening of reminiscence, '**One hundred Years of the Bristol Scientific Club**', presented by Professor C Bruce Perry, Professor Sir Alfred Pugsley and Professor Sir Charles Frank.

John Littler knew that I had researched the history of the local Section of the Society of Chemical Industry, the Bristol & South Wales Section formed in 1885, shut down 1889, restarted in 1917 and continues 'Ship shape and Bristol fashion' to the present day as the SCI Bristol & South West Section.

He also knew that I was interested in comparing the membership of the SCI Section with that of the Bristol Scientific Club, both having started at around the same time.

It was a fascinating evening hearing the three eminent scientists giving their personal understanding of the early beginnings and subsequent development of the Club, highlighting the personalities and their topics over the years. This led to a lively discussion. However, I was disappointed to learn that the Club had no Rules, no Minutes and that the Programme Cards before 1900 no longer existed.

I was delighted to be elected to membership of the Club on 5 November 1988. I am very proud to be a member and enjoy the fellowship at the dinner table, listening to and seeing illustrated presentations by experts in their many fields and taking part in the discussions.

When John Littler invited me to prepare a history of the Bristol Scientific Club for the records I accepted but with trepidation, for how can you write about a Club which has no Rules, no Minutes, no early membership lists and an incomplete set of Programme Cards?

## EARLY BEGINNINGS

I started by preparing a file of all those who introduced subjects from the Programme Cards starting in 1900. The names given were, and still are, very formal with initials and no affiliation. Also, the subject titles don't always help to identify the presenter! There were no lists of members until around 1963. These I have gathered together and in some cases the address given does indicate the affiliation of the member. The red attendance book was started in 1970-71, the 74<sup>th</sup> Session, when the Secretaries were IH Ford and ABJ Cruickshank.

John Littler notes *"I was given to understand that the absence of degrees, honours, or affiliation was to show that all members contributions were of equal value, regardless of the public status of the speaker"*

I am a keen collector of books relating to the history of the Chemical Industry and on one of my visits to Hay on Wye, the town of bookshops, I found Sir William A Tilden's book 'Sir William Ramsay KCB, FRS Memorials of his life and work'. Published by MacMillan in 1918.

**Dr William Tilden**, from 1872-80 was Senior Science Master at Clifton College, he subsequently became professor of chemistry at Birmingham, and then at the Royal College of Science at London.

He was an active member of the Bristol Naturalists Society (BNS). On 12 December 1877, he was elected the first Secretary of the Physical & Chemical Section and after his move away from Bristol was made an Honorary Member of BNS. He was knighted in 1909.

Tilden's book gave me the lead I needed. I already knew that Dr William Ramsay came to Bristol in the early Spring of 1880 as Professor of Chemistry at University College, Bristol. He succeeded Dr EA Letts, the first Professor of Chemistry, who had moved in 1879 to the Chair of Chemistry at Belfast University. In 1881 Ramsay additionally became the Principal of University College. In 1885 he was the Chairman of the ephemeral Society of Chemical Industry Bristol and South Wales Section, which closed down by reason of its inactivity in 1889. I believe this was due to the departure in 1887 of Professor Ramsay, its driving force at that time

Tilden wrote:

*"Throughout the early years of the new institution [University College, Bristol] the friendly intercourse which existed between members of the staff and the masters of Clifton College helped to give unity of aim in the higher education of Bristol and to keep in touch with men from the older universities."*

*"A little Browning Society, which had been started by some of the masters at Clifton, afforded opportunities for meeting them and joining them in grappling with the obscurities of Paracelsus and Sordello. **Longer lived and possessed of great vitality was the Scientific Club, which arose out of a previously existing Society meeting at the Museum.**"*

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***“Ramsay and Shenstone (Head of Science at Clifton College) were the chief promoters of the Club, which met four or five times in the session, and after an informal dinner some member would speak rather than read a paper on any subject which he had made his own.”***

The above was confirmed by an entry defining the Bristol Scientific Club in Arrowsmith's Dictionary of Bristol, 2<sup>nd</sup> Edition 1906:

*The Club owes its initiation, in the year 1888 [1886] to several of the leading scientific men, who felt that it was desirable to bring together those who took interest in any of the branches of science. The members - limited to fifty in number - dine together and afterwards discuss some subject which is introduced by one of their number, and by these means all the scientific topics of the day have been brought before the members of the Club. That it is fully representative of the scientific thought of Bristol is shown by the fact that the movement leading to the invitation of the British Association to Bristol [the third visit to Bristol] in September 1898 had its origin at one of the meetings of the Club in 1897.*

*Hon Secretaries: Dr F Francis, University College  
and Dr J Odery Symes, 71 Pembroke Road, Clifton*

This led me to a search for the Society, which held its meetings at the Museum. The best fit was The Bristol Naturalists Society (BNS) founded in 1862, which met from 1872 at the Museum and Library near the top of Park Street in Queens Road.

Arrowsmith's Dictionary of Bristol, 1884 says that The Bristol Naturalists Society was founded to concentrate and stimulate scientific life. It had a Botanical, an Entomological, a Geological and a Chemical & Physical Section.

Arrowsmith's Dictionary of Bristol, 1884, describes the Museum and Library Association formed in 1872 by the union of two Societies, The Philosophical Institution for the Advancement of Science, Literature and Fine Arts (founded in 1823) with Bristol Library Society (originally in King Street 1772 and then from 1820-71 at the bottom of Park Street in the building, which on 2 February 1872 became the Freemasons' Hall)

The Speaker at the Bristol Scientific Club Dinner Meeting on 12 October 1907 was Sir William Ramsay, of University College, London. Whether he had retained his membership or attended the occasion as an invited guest is not known but Tilden had indicated that Ramsay was a founder member.

It is interesting that he did not present 'a subject for discussion', merely calling it 'An Address'.

Tilden wrote:

*On the twenty-first anniversary of the foundation of the Club, Ramsay was present as a guest and spoke pleasantly and brightly of episodes in its early days. With that kindly twinkle of the eye which with him so often heralded*

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*some whimsical touch or paradox, he attributed such success as he had achieved to the great advantage of a bad memory for anything merely read or heard of, and the necessity, in his case, of actual contact with experimental evidence as the window through which the truths of science could alone be perceived.*

The 1907-08 Programme Card of the Bristol Scientific Club was headed '21<sup>st</sup> Session', the first time this wording had been used. Calculating back, this points to the first Session being 1887-88. This I dispute. It is my belief that the Sessions are incorrectly numbered! The above excerpt states clearly that 12 October 1907 was the 21<sup>st</sup> Anniversary of the foundation of the Club. It was not the 21<sup>st</sup> Session. The inaugural meeting must have been October 1886, if Professor Ramsay was a founder member, for by October 1887 he had moved to University College London.

Compare this calculation with the birth of a child, a baby is not one until its first birthday, or anniversary of its birth, when it has been alive for 12 months. It is now too late to change, so 1886-87 has to be the Inaugural Session numbered Zero.

(See Appendix (A)      Session numbering)

### **EARLY MEMBERSHIP OF THE BRISTOL SCIENTIFIC CLUB FROM 1886**

Professor William Ramsay was a man of all-round ability. He was a good athlete, an accomplished musician and a gifted linguist but above all I believe he was a catalyst in all his activities. He had contact with a wide range of people with an interest in Science who could well have been encouraged/invited to become founder members of the Bristol Scientific Club. These 'possible members' could have belonged to any of the following groups of men.

## **(1) The Society of Chemical Industry**

Professor Ramsay was an original member of the Society of Chemical Industry in 1881. He was the first Chairman of the SCI Bristol and South Wales Section Committee in 1885, which was made up of members living in both Bristol and South Wales.

(See Appendix (B) for complete list of 1885 Committee)

Those actually living in Bristol were:

Professor William Ramsay (Chairman)  
Philip John Worsley (Vice-Chairman)  
EG Marks (Local Secretary & Treasurer)  
Dr Alfred C Fryer  
Thomas Morgans  
Alfred Capper Pass  
George Frederick Schacht  
William Ashwell Shenstone  
William Windus

## **(2) The Bristol Naturalists Society**

Most those named in (1) above can be found in the membership lists of the Bristol Naturalists Society (BNS) and the Annual Reports between 1886 and 1900. Not only were they members but they were taking an active part.

**Dr William Ramsay** came to Bristol University College as Professor of Chemistry in February 1880. He lost no time In joining the Bristol Naturalists Society for by 28 April 1880 he spoke to the Physical and Chemical Section on 'The cohesion of liquids'. In 1881, in addition to his professorial duties, he became the Principal of University College.

In 1882 John Beddoe and William Ramsay became BNS Vice Presidents. John Beddoe became BNS President 1883-84 and William Ramsay succeeded him as BNS President from 1884 until 1887 when he left Bristol to take up his appointment to the Chair of Chemistry at University College London.

In 1888 BNS elected Professor William Ramsay to Honorary Membership.

**Philip John Worsley** became the Physical & Chemical Section's first President when it was constituted on 12 December 1877. He joined the Netham Chemical Company as Manager in 1861 and rose rapidly to become Managing Director. He was a member of the original committee set up on 11 June 1874 to establish University College, Bristol.

In 1880, he was nominated by the University of London as their representative upon the Council of University College, Bristol. He was later to become its Vice-Chairman. In 1909, when Bristol University was established, he was made an original Member of Court.

**Thomas Morgans** was a Civil Engineer working from The Guildhall Chambers. In



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November 1883 he gave an account of the industry of wood distilling as practised in England. The Inaugural meeting of the Engineering Section was held on 21 December 1886 and during the first year Thomas Morgans read a paper.

**Alfred Capper Pass**, was a member of the famous non-ferrous metal smelting family, whose works was in Bedminster. He was Secretary of the Geological Section in 1877, a position he held for many years until he became President of the Geological Section in 1890. He too was a member of University College Bristol Council until his death in 1905. In 1909 when the University of Bristol was established Capper Pass Ltd endowed a Chair of Chemistry in his memory. The first holder was Professor Francis Francis.

**Frederick Schacht** was a Dispensing Chemist in Clifton. On 1 May 1879 he was appointed by BNS as a Member of Council. In 1890 he became President of the Chemical & Physical Section (sic)

**William Ashwell Shenstone** was Assistant Science Master at Clifton College in 1874. In 1875 he moved to become Science Master at Taunton School and in 1877 moved to Exeter School, returning to Bristol in 1880 to succeed Dr William Tilden as Head of Science at Clifton College, a post he held until his death in 1908. On his return to Bristol in 1880 he became an active member of BNS, was Secretary of the Chemical & Physical Section and in 1882 was elected as a Member of Council.

**Dr Alfred C Fryer**, had been an assistant to Dr Angus Smith, the first Inspector of Alkali Works, based in Manchester, he moved to Bristol in 1885 to be the local Alkali Inspector. He was a member of BNS but not until 1890.

The two Bristol SCI Committee members not found in the BNS records were EG Marks, an analytical chemist, son of the Vicar of Norton, near Gloucester and William Windus, who was Worsley's right hand man at the Netham Works. He came to Bristol in 1878 from Hutchinson's Alkali Works in Widnes.

Two other early SCI members who were also listed as BNS members were Dr Sydney Young and MW Dunscombe.

Dr Sydney Young was Assistant to Prof Ramsay from 1882. He presented papers and was in 1886 the Secretary of the Chemical & Physical Section. In 1890 he was a Member of Council together with Thomas Morgans and Alfred Capper Pass. He was the President of BNS from 1894-96.

MW Dunscombe, the owner of an Optician's shop in St Augustines Parade, was an original member of the SCI in 1881 and was active in BNS making several presentations.

### (3) University College Staff

These included Professor William Ramsay and Dr Sydney Young (Chemistry).

Silvanus Thompson (Professor of Experimental Physics).

Hele Shaw (Engineering)

Conwy Lloyd Morgan (Professor of Geology, Biology and Zoology. He later added Professorships in Psychology and Ethics!

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Dr E Markham Skeritt (Dean of the Faculty of the Medical School)  
Dr Joseph G Swayne (Lecturer, in 1893 he occupied the first Chair, in Midwifery)

### (4) Clifton College Science Staff

**Herr Leipner** was one of the earliest appointments made by the Reverend John Percival, the Headmaster of Clifton College, in 1862 as a Science Master, he subsequently became Professor of Botany at University College, Bristol, later Bristol University.

**William Ashwell Shenstone** (See SCI Committee above) was Head of Science from 1880-1908.

### (5) Leading men of Business

Tilden wrote:

*“Through the members of the College Council also the advantage of intercourse with some of the leading men of business was secured to the professorial staff. The great majority of the leading citizens had their residences on the high ground of Clifton and the neighbourhood of the Downs, and thus the best elements in the society of the place were brought by the physical circumstances of the locality near together.”*

Both Philip Worsley and Alfred Capper Pass were members of the University College Council as well as being leading industrialists. Alfred Fryer, the Alkali inspector, would have visited the Netham Alkali Works and the Non-Ferrous Smelting Works in Bedminster. Frederick Schacht was a Dispensing Chemist in Clifton. All these four lived on the high ground of Clifton.

From a list of those attending the 3<sup>rd</sup> Annual Dinner of the Bristol University College Club held on 26 May 1886 can be added CB Hare (Linoleum manufacturer) and John Lysaght (Galvanised iron manufacturer).

A list of SCI Bristol and South Wales Section members living in Bristol in 1888 shows a number of Works addresses, for example Netham Chemical Works, Avon Manure Co and Broad Plain Soap Works, from which some of the early Bristol Scientific Club members may have originated.

(See Appendix (C)

SCI members living in Bristol 1888)

## ADMINISTRATION

From the start the Bristol Scientific Club was a Dining Club and it is assumed that the founding members did not feel any need for having Minutes. It did not have any Rules but it required someone to deal with the administration. Therefore a Secretary was necessary. From 1900 the annual programme cards show that two Secretaries were in post and the appointment of two has continued. Over the years the job specification for the Secretaries has no doubt evolved.

Currently, the duties of the Senior Secretary are to arrange the programme, look after details of the meetings, ensure that there is a President, update the membership list, sign cheques, convene Past President's meetings and inform them of the credentials of potential new members, prepare the annual documentation, welcome new members and arrange the summer visits.

The duties of the Junior Secretary are to send out literature and reminder cards, collect replies, liaise with the caterers over numbers, collect the money and bank it, keep the register of members and generally assist.

It is said that ideally a member should become the Junior Secretary for say three years, become the Senior Secretary for a further three years and then retire. This progression has seldom been achieved. Bruce Cruickshank covered a period of eleven years as a Secretary, from 1970 until his untimely death in 1981. John Littler was still in post in 2002, having started his period in office in 1984. He found the post useful and rewarding but said that at some point a younger successor would be needed. The record, to date, is held by JAO Muirhead, he started in 1927 and continued until 1949!

### SENIOR & JUNIOR SECRETARIES FROM 1900

1900.1	Patrick Watson Williams, 1 Victoria Square Francis Francis, University College
1901-06	Francis Francis, University College J Odery Symes, 11 Richmond Hill
1906.7	Francis Francis, University College EHE Stack, 10 Whiteladies Road
1907.10	Francis Francis, University College EHE Stack, Arvalee, Clifton Down Road
1910.14	EHE Stack, Arvalee, Clifton Down Road James W McBain, 71 Cotham Brow
1914.19	Club Closed during World War 1
1919.20	EHE Stack, Arvalee, Clifton Down Road James W McBain, 19 Henleaze Road

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1920-27	James W McBain, 19 Henleaze Road H Ronald Hasse, 64 Coldharbour Road
1927.32	H Ronald Hasse, 19 Henleaze Road JAO Muirhead, 42 College Road
1932.35	H Ronald Hasse, 19 Henleaze Road JAO Muirhead, 26 College Road
1935.36	JAO Muirhead, 26 College Road CM Yonge, 15 Westbury Hill
1936-40	JAO Muirhead, 26 College Road CM Yonge, 214 Redland Road
1940.45	Club Closed during World War 2
1945.46	JAO Muirhead, 26 College Road L Harrison Matthews, 27 Hanbury Road
1946.49	JAO Muirhead, 38 College Road L Harrison Matthews, 27 Hanbury Road
1949-50	L Harrison Matthews, 27 Hanbury Road JA Kitching, 8 Old Sneed Park
1950.51	L Harrison Matthews, 27 Hanbury Road JA Kitching, Dept of Zoology, Bristol University
1951.56	JA Kitching, Dept of Zoology, Bristol University JW Mitchell, HH Wills Physical Laboratory, Bristol University
1956.59	JW Mitchell, HH Wills Physical Laboratory, Bristol University HP Whiting, Dept of Zoology, Bristol University
1959.63	HP Whiting, Dept of Zoology, Bristol University A Couper, Dept of Physical & Inorganic Chemistry, Bristol University
1963-67`	A Couper Dept of Physical Chemistry, Bristol University AJ Willis, Dept of Botany, Bristol University
1967.69	AJ Willis, Dept of Botany, Bristol University IH Ford, Dept of Geology, Bristol University
1969.70	A Couper, Dept of Chemistry, Bristol University IH Ford, Dept of Geology, Bristol University
1970-75	IH Ford, Dept of Geology, Bristol University AJB Cruickshank, Dept of Chemistry, Bristol University

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1975-81	AJB Cruickshank, Dept of Chemistry, Bristol University R Bradshaw, Dept of Geology, Bristol University
1981.84	Reg Bradshaw, Dept of Geology, Bristol University D Hamilton, Dept of Geology, Bristol University
1984.85	R Bradshaw, Dept of Geology, Bristol University John S Littler, Dept of Chemistry, Bristol University
1985-88	JS Littler, School of Chemistry, Bristol University Donald Gudan, Dept of Physics, Bristol University
1988.89	JS Littler, 18 Hillside Road, Redcliffe Bay, Portishead, BS20 8EW D Gudan, Dept of Physics, Bristol University
1989.99	JS Littler, 18 Hillside Road, Redcliffe Bay, Portishead, BS20 8EW Alan Worley, Dept of Physics, Bristol University
1999.2000	JS Littler, 18 Hillside Road, Redcliffe Bay, Portishead, BS20 8EW Matt Nichols, Rolls Royce plc
2000-2007	JS Littler, 18 Hillside Road, Redcliffe Bay, Portishead, BS20 8EW Matt Nichols, 26 Jellicoe Avenue, Stapleton, Bristol BS16 1WJ

Thus, there have been 22 Secretaries from 1900-2002.

2007.2009	Vincent J Smith, Dept of Physics, University of Bristol, Tyndall Ave BS8 1TL Matt Nichols, St Adhelm's Close, Malmesbury Wiltshire SN16 0DJ later 12 Sandpits Lane, Sherston, Wiltshire.SN16 0NN.
2009.2010	Vincent J Smith, Dept of Physics, University of Bristol, Tyndall Ave BS8 1TL John W Phillips, The Paddocks, 50 Bristol Rd, Frenchay BS16 1LQ

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## MEMBERS' ANNUAL SUBSCRIPTIONS

Annual subscriptions have obviously increased with inflation. They have been based upon the cost of three meals, plus room charges and a small administrative charge. The subscription for the Session 2002- 2003 has been held at £50 (fifty pounds), with additional meals at £15 (fifteen pounds). Charges made in the early years of the Club are not available. The earliest information found is 1978-1979, when the subscription was £11.50 (eleven pounds and fifty pence) and additional meals were £4 (four pounds).

Bruce Cruickshank, the Senior Secretary in 1979, in response to members concerns

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about the steadily rising costs, observed that '*members should bear in mind that £4-£5 is now the norm for a sit-down dinner*'.

John Littler, the Senior Secretary in 2002, has stated that a financial balance is usually achieved by some members not taking up their three meals for themselves or their guests, while additional meals are charged effectively at cost. All income and expenditure passes through the Club's Bank account and the Secretaries are not paid, other than refunds for legitimate expenditure. In 2009 the system was changed to an annual membership fee, with payment on the night for dinners taken. The printing of numbered dinner tickets had been dispensed with earlier in favour of logging attendances on a computer

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### PRESIDENTS

A member of the Bristol Scientific Club, who is invited to be the President for the evening, says Grace before the Dinner. Afterwards the President introduces the speaker and the subject matter, leads the discussion and finally proposes a vote of thanks to the speaker.

From the next meeting, that member becomes a Past President and joins the Past Presidents who are consulted informally by the Club's two Secretaries, before each Dinner Meeting. Members are elected by the Past Presidents, since they approve or veto (!) nominations for new members. They also approve suggestions from the Secretaries for speakers and their topics.

From the circulated list of Members and their addresses issued annually from 1963, it is possible to identify members who have presented a subject+ and members who have presided\*.

The 25 Past Presidents at the commencement of the 2002-03 session are listed below.

#### PAST PRESIDENTS for 2002-2003

Professor R D Adams	*2
Dr T H K Barron	*2
Professor D E G Briggs FRS	*
Dr Beryl D Corner	*3
Dr A Couper	*3
Professor D L Dineley	*2
Professor R N Dixon FRS	*2
Professor G Eglinton FRS	*

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Mr R C Feneley	*3
Dr T Green	*2
Professor R L Gregory CBE FRS	*5
Professor H Gutfreund FRS	*
Mr R A Holland	*
Professor C L Honeybourne	*2
Dr H F Kay	*
Professor A R Lang FRS	*
Dr J S Littler	*2
Dr B Lowrie	*
Sir Alexander Macara	*
Dr Hilary Muirhead	*
Dr J H Musgrave FSA	*2
Professor R H Ottewill FRS	*
Professor B T Pickering	*
Professor P A E Stewart FEng	*
Dr J D Wragg CBE	*2

## BRISTOL SCIENTIFIC CLUB

### HONORARY MEMBERS

The first Membership list in 1963-64 records the name of an Honorary Member. He was Dr K Wills and had been a Club member for at least 50 years, having been the Speaker on 14 March 1903. His subject was Phototherapy.

The dictionary definition of phototherapy is 'the treatment of disease by light'. One wonders if this included sun-bathing?

He continued to be listed up to 1967. His address was The Old Vicarage, Henbury, Bristol. Apart from that fact nothing else is known about him.

Assuming that Dr K Wills was the first Honorary member then the second member to be awarded Honorary Membership was Professor C Bruce Perry MB, ChB, FRCP. He had completed 50 years of distinguished service to the Club and was elected to Honorary Membership on 31 October 1989.

On 23 January 2009 Prof F Gutfreund was elected an Emeritus member, on the grounds that although he had retired and moved away from Bristol, he might still be interested in coming, and could be kept in touch at no cost to the Club by e-mail. This had been unofficial policy for a very few members before this date.

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### VENUES

One problem which has beset the Club Secretaries over the years has been the selection of venues, where there was enough space for the total membership to have both a Dinner and a Discussion, and where good food was provided at a reasonable cost. Even the room temperature was criticised on one occasion, not too cold but too hot!

Bruce Cruickshank, Senior Secretary and R Bradshaw, Junior Secretary, wrote a note to all Club Members dated 15 January 1979, which clearly demonstrates the way they tackled the problem:

#### THE FORM OF CLUB MEETINGS

#### BACKGROUND

*The Club began in 1886-7, as a Dining Club in the Victorian tradition. From the outset it has met on Saturday evenings. The first venue was the Clifton Downs Hotel, then the Grand Spa. In 1920 it moved to the Students' Union, and remained in the Victoria Rooms until 1934. A period in the Royal Hotel (1935-1948) preceded the Club's long association with the Senior Common Room (1949-1962 in the Queens Road premises, then 1963-1976 in the Senate House). When the Senate House catering passed out of the hands of the Senior Common Room the Club soon faced the choice between a change of venue or a change of day, and opted for the former, returning to the Royal in 1976.*



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### THE PRESENT PROBLEMS

*Members' comments suggest three main areas of concern: steadily rising costs; the overheating of the meeting rooms in the Royal; and the fact that the facilities are less comfortable than in the Senior Common Room.*

*In considering how these problems might be overcome, however, members should bear in mind that £4 - £5 is now the norm for a sit-down dinner (Senior Common Room prices are in the upper part of this range); that the University Catering Service will not undertake Saturday evening dinners; and that only the more expensive Bristol Hotels have meeting-room facilities superior to those at the Royal. It is just possible that cold buffet facilities could be provided on University premises on a Saturday, using non-University caterers. The following questions seem to cover the realistic possibilities. These include*

- (1) the status quo*
- (2) as at present, but in a different hotel*
- (3) week-day evenings in the Senate House/Senior Common Room (Fridays might be a compromise); or Long Ashton*
- (4) Saturdays in the Senior Common Room with cold buffet, limited bar facilities*
- (5) Week-day evenings in the Refectory Dining Room, hot meal, buffet service - this would be cheaper than at the Royal*

*Since a vote on these alternatives might not be decisive, we ask you to complete and return the enclosed Questionnaire. [It is fascinating to note that the Questionnaire bears the date 15 January 1978. Since the Summer visit in 1978 was cancelled (see page 13), 15 January 1979 appears to be the correct date.]*

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### QUESTIONNAIRE RESULTS

(from hand-written notes)

Questionnaire      68 replies out of about 110 available

Should the Club continue as a Dining Club?      Yes 64      No 2      Don't know 2  
(Comment: 'clearcut')

Which evening?      Sat 30      Fri 25      Other days 3      Don't know 6  
(Comment: 'indecisive')

Type of meal?      Formal 3-course 45      Cold buffet 18      No view 5  
(Comment: 'seems clearcut')

Heating Room Comfort?      Overriding 26      Important 26      Not overriding 16  
(Comment: 'an overall low level of satisfaction')

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The response to the Questionnaire gained decisive support for the Dining Club to continue and for a formal meal to be taken in comfortably heated surroundings. The Club has always met on a Saturday evening

From Appendix (D) - BSC Venues Summary, it can be seen that the Club continued to meet at the Royal Hotel until 1981, when it moved to the Hawthorns Hotel until 1986. It then had a brief stay at the Senate House until 1987, before moving to the University Refectory Conference Suite in Queens Road until 1993.

The Club made a move in 1993, and returned to The Hawthorns (now owned by the University).

However in 2006 steeply rising room charges threatened the stability of the club, and the meetings were held at the Bristol Golf Club, near Cribbs Causeway. This proved less than satisfactory owing to distracting noises from the adjacent bar, and in addition the Club was put into receivership. One meeting was rescheduled because of the failure of the electricity supply. After consultations with members it was agreed to try to split the meetings between Fridays and Saturdays, and to test the facilities at both St Monica Trust, Cote Lane, and at Trinity Theological College. From the subsequent session all meetings were held at Trinity. The dinners have become more informal, with a self-service hot buffet, and BYO wine. Other administrative changes introduced at this time included the maximum use of email for contacting members, and the abolition of meal tickets and printed fixture cards. Members now only pay an annual subscription up front, and pay the cost of the meeting on the day. This results in a smoother cash flow, and less work chasing members for the cost of extra meetings or guests.

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### PROGRAMME CHANGES

A problem, which besets Programme Secretaries of all Societies, is that of ensuring that the speaker booked can make it on the night. On several occasions it has been found necessary to arrange a swap when the speaker was called abroad on business.

There was one unfortunate occasion, 2 February 1991, when the scheduled talk Rationally Redesigned Enzymes was not presented due to the untimely death of the speaker, T V Lee, a member of the School of Chemistry Staff. At short notice John Holbrook, Professor of Biochemistry, undertook to speak. He matched the original subject by presenting Enzyme Engineering. It is interesting to note that in order to maintain the tradition that all speakers are Club members, he was elected at that meeting. However, records show that he did not maintain his membership of the Club.

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### SUMMER VISITS

When Summer Visits started is not known but Aitken Couper, who was a Secretary between 1959 and 1970, has no knowledge of Summer Visits taking place. The

## BRISTOL SCIENTIFIC CLUB

earliest date of a Summer Visit found in the records is 1974. It seems likely that IH Ford and AJB Cruickshank were the creators of this extra meeting, for they were the Secretaries in 1973-75. Further evidence is given by a letter to the Club members from AJB Cruickshank and R Bradshaw, the Secretaries, dated 15 January 1979, which says:

*'Last session [1977-78], as in the three preceding sessions, we arranged a summer meeting; but whereas the first three meetings were outstandingly successful, last Summer's meeting at the National Museum of Wales, Cardiff, had to be cancelled for lack of support'.*

The response to the Summer meeting question was:

Summer Meeting?                      32 interested, 22 for coach  
(Comment - 'seems insufficient support')

The Secretaries evidently had second thoughts and they arranged a successful visit to the Wildfowl Trust at Slimbridge in Summer 1979. These Summer Visits have continued to be a part of the Club's annual programme.

There is one year, 1976, when no information has been found. Another year, 1978, as reported above, and again in 1983, when the visits were cancelled for lack of support.

In 1993 the visit to the cable ship at Avonmouth docks was cancelled at the very last minute, when the ship had to sail to repair a cable in the North Atlantic! The 'Sir Eric Sharp' was on standby for just such an emergency.

Summer Visits have been made to a wide variety of places and usually were followed by a meal at the venue or at a local hostelry. Thus they provide the Club members with social events visiting places of scientific interest, coupled with food and fellowship, which are the hallmarks of the Bristol Scientific Club.

4 July 1974	Long Ashton Research Station
2 July 1975	Bristol Zoo, with a dinner and a talk by Beryl Corner.
1976	No details available
13 July 1977	Berkeley Nuclear Laboratories
1978 (Cancelled)	Cardiff Castle National Museum
1979	The Wildfowl Trust, Slimbridge
26 June 1980	School of Veterinary Sciences, Langford House
4 July 1981	Marine Biological Association Laboratory, Plymouth
1 July 1982	Agricultural Research Council Letcombe Laboratory, Wantage

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1983 (Cancelled)	The Grassland Research Institute, North Wyke, Okehampton
4 July 1984	Rolls Royce Ltd, Patchway
1985	ICI Severnside Works (fertilizer plant)
19 July 1986	Manor Farm, Kingston Deverell (Downland agriculture and conservation)
27 July 1987	Open Day at BAC

Note: On 31 October 1987, Richard Gregory led a guided tour of the Exploratory. This was included in the Programme Card for 1987-88 and is not counted as one of the Summer Visits.

25 June 1988	Wessex Water, Saltford
17 June 1989	The Jenner Museum, Berkeley
30 June 1990	Folly Farm, Bishop Sutton (Avon Wildlife Trust)
22 June 1991	Westonbirt Arboretum
13 June 1992	Alvis Bros Ltd, Lye Cross Farm, Redhill
16 May 1993	Tour of Cable Ship 'Sir Eric Sharp' at Avonmouth Dock (cancelled at the last minute: the ship had to sail!)
7 June 1994	The Second Severn Crossing Visitor Centre & Tour
12 July 1995	Middlebrook Mushrooms Ltd, Langford
18 June 1996	New School of Veterinary Science, Southwell Street
24 June 1997	Oldbury Nuclear Power Station
23 June 1998	Moorlynch Vineyard & Wine bar
8 June 1999	Rolls Royce plc`
1 June 2000	New Synthetic Chemistry Laboratories, Bristol University
16 June 2001	Cotswold Perfumery, Bourton on the Water
15 June 2002	Peat Moors Iron Age Visitors Centre, Westhay
23 June 2003	Seabank Combined Cycle Power Station, Avonmouth
12 June 2004	Sheppey's Cider, Taunton

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6 June 2005	Intelligent Automated Systems Laboratory, UWE
4 June 2006	Science Museum, Wroughton
21 June 2007	University new Botanical garden

### BRISTOL SCIENTIFIC CLUB 2001-2002 SYNOPSIS OF TALKS

In recent years, the Secretaries have published, and circulated to members, synopses of the four talks for the session. The earliest copy found was 1995-1996. As an example, the synopses of the four talks given in 2000-2001 are shown below.

4 November 2001   M Nichols   **'The Essence of Change...'**

Without doubt change impacts all of us at some time in our lives. Understanding how we as individuals react to change can help us deal with it more effectively. Understanding both how people react to change personally and what lies at the core of all successful changes enables anybody faced with the challenge of introducing change to be able to better plan and manage its introduction. Matt will share his experiences of corporate changes at Rolls Royce.

2 December 2001   A Winfield   **'Industrial robotics: artificial animals'**

By describing the work of the intelligent Autonomous Systems lab at UWE this talk will aim to survey recent developments in mobile robotics research. A theme that runs through much of the work of the laboratory is the active involvement of areas not normally associated with engineering research, such as animal behaviours, insect ethology, and biochemistry. Not only is the work inspired by biology, it is, in some instances, modelled directly on animal systems.

This is especially evident in the laboratory's work on collective robots, which seek to replicate the kind of emergent behaviours seen in social insect colonies. Are such systems more properly described as industrial robots, or artificial animals?

3 February 2001   C Hunter   **'Tree Biotechnology'**

Compared with many crops, such as cereals, trees have not been subjected to aeons of intensive plant breeding. Current approaches to the rapid improvement of tree crops will be discussed, including aspects of plant tissue culture, somatic embryogenesis, cryopreservation and pathogenic virus elimination.

3 March 2001   I Donaldson   **'Minerals, Chemicals and Local Industries'**

Or **'Vinegar and Smokescreens'**. Chemical processes were developed by local industries from the Middle Ages but a Bristol invention of 1831 revolutionised the chemical industry.

## **ADMISSION OF LADIES – CREATING A PRECEDENT?**

At the Centenary Meeting held on 21 November 1987, reference to the admission of women scientists to membership of the club was made by Sir Charles Frank. After that meeting Aitken Couper wrote a note from his recollections of the events which took place during his Secretaryship 1959-70. John Littler sent a copy of this letter to Sir Charles and he responded. Transcripts of these two documents are as shown below.

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### **ADMISSION OF WOMEN SCIENTISTS TO MEMBERSHIP OF THE BRISTOL SCIENTIFIC CLUB**

A number of members of the club, beginning in 1960 or thereabouts, had discussed the fact that no woman scientist had been elected to membership, and that there were then in Bristol a few women of some seniority and established scientific reputation who would undoubtedly be eligible. Having no constitution or rules, the club relied upon the two secretaries to administer its activities guided by views expressed at the brief meetings of the Past Presidents, who elected new members nominated and seconded by any members of the club. A discussion between Past Presidents concluded that there was no constitutional procedure by which the established customs of the club could be changed, and Professor Frank commented that the law appeared to be in the hands of the secretaries, but which was the Mede and which was the Persian, he could not discern!

In December 1961 the secretaries were authorised to circulate all members with a referendum to establish their views on the admission of women as members and separately their admission as guests of the club. This was conducted in February 1962 with an inconclusive result, and no change was made.

In November 1965, Professor H.E.Hinton nominated Professor Lilian Hawker for membership, seconded by Professor J.E.Harris, and the secretaries judged that the time was ripe for a second referendum, which was held in January 1966, establishing a substantial majority in favour of admitting women both as members and guests.

Many members who had voted against the change in 1962 had changed their minds by 1966. A number of vacancies were reserved in anticipation of the election of several women.

Deeming that it might be embarrassing for one lady only to be a member, nominations for five members were received, seconded and elected unanimously. Accordingly the following were invited to become members:

Dr B.Corner	Paediatrician
Dr K.W.Dunning	Chemist
Professor L.Hawker	Mycologist

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Dr P.M.Jenkin  
Dr A.Mayr-Harting

Zoologist  
Bacteriologist

All accepted membership except for Professor Hawker and a letter to her of 11<sup>th</sup> March 1966, describing how the change of policy had been brought about, failed to change her mind.

A.Couper      Junior Secretary 1959-63  
Senior Secretary 1963-67  
and 1969-70

[Amended version. Dates corrected by Aitken Couper 2 September 2002]

-----  
Orchard Cottage  
Grove Road, Coombe Dingle  
Bristol BS9 2RC  
22 December 1987

Dear Dr Littler

Admission of Women Scientists to  
The Bristol Scientific Club

Thank you for sending me a copy of Aitken Couper's note on this matter.

I can fill in some detail about what he refers to as 'A discussion between Past Presidents'. From Couper's note it follows that this took place in or before 1962. It was called and chaired by Professor Heilbronn, presumably in the capacity of Senior Past President, and was a sit-down meeting around a Committee table, probably in Room G11 of Senate House.

The substantive issue was not discussed. The meeting began with the Chairman asking one of the Secretaries to inform us about the rules of our constitution. He told us that the first rule of the constitution was that there were no rules (which is itself paradoxical). I then raised the quibble that if we voted on the proposition for which we had been called together, we should be making a rule, and thus be in breach of the constitution. The Chairman accepted that point and thereupon closed the meeting. The inference that there was no constitutional procedure by which the customs of the Club could be changed must have been drawn by the Chairman himself: it was not discussed by the meeting. Had it been, I would have argued that since there was no rule we were free to elect a lady member whenever we wished. Anyway, I would have accepted the circulated referendum which followed as a reasonable way of finding out whether we wished to, though things might have moved faster if, once we were together, we had discussed that question.

After some lapse of time (it surprises me to discover it must have been as much as 2½ years) Howard Hinton asked me whether I would support the nomination of Professor Lilian Hawker for membership, and I agreed to. He did not tell me he was asking anyone else, and I supposed he was asking me to be seconder: so I erroneously told our 'reminiscences' meeting that that nomination was proposed by

## BRISTOL SCIENTIFIC CLUB

Professor Hinton and seconded by myself. Aitken Couper's record that the seconder was John Harris will assuredly be correct.

I do not think I participated in the decision to nominate five ladies together (though it would surely have had my support). This is unsurprising, since in my experience, with the sole exception of Heilbronn's meeting, all meetings of Past Presidents have been informal stand-up discussions among the half dozen (+ or -) whom one of the Secretaries has been able to rustle together before a dinner of the Club.

I think I did make that crack about the Mede and the Persian on some occasion but I don't remember the context.

Yours sincerely  
Charles Frank

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When I started to research the history of the Bristol Scientific Club, I approached Aitken Couper to see whether he could shed more light upon the admission of women scientists. He was able to provide me with details and documentation from his immaculately kept personal files from 1959-70 while he was a Club Secretary.

So, this fascinating event in the history of a male orientated Dining Club commenced on 25 February 1961 when the Secretaries, HP Whiting and A Couper wrote a memorandum to the Past Presidents.

*The possibility of admitting women to membership of the club has been brought to the attention of the secretaries by a number of members who consider this point of policy merits serious consideration.*

*The opportunity for such consideration exists at this moment, since there are at present sufficient vacancies to enable membership to be offered to the five or six women in the University who by their eminence and seniority would appear to be immediately eligible.*

*In the opinion of those members who wish membership extended to women, the present policy of the club in inviting members to introduce subjects in a way devised to encourage widely-based discussion, is sufficient safeguard of the club's scientific purpose.*

On 29 November 1961 a further memorandum reported opinions expressed and how a ballot might be arranged. The Past Presidents agreed to a ballot. The Secretaries received 67 communications and reported at the Dinner on 2 December 1961 that 21 were in favour of women, 6 against and 40 did not indicate for or against!

On 3 February 1962, Professor Heilbronn convened a special meeting of Past Presidents, which is described in detail in Sir Charles' letter above. On 7 February 1962 Professor Heilbronn wrote a letter to the Secretary, Philip Whiting, apologising for adjourning the meeting and leaving further steps 'to the Secretaries' discretion'.



## BRISTOL SCIENTIFIC CLUB

On 20 February 1962 the Secretaries sent a ballot paper to all club members with the indication that the Past Presidents had resolved that 75% in favour of the membership of women was needed to make a change.

The result of this ballot was declared on 3 December 1962. Out of the total membership of 107, 102 votes were returned. 51 said Yes; 33 said No. Since only 50 % of the membership was in favour, no action was taken.

After a lull of three years, the matter again was raised when on 5 November 1965 Professor Hinton wrote to Aitken Couper:

*I understand that the Professor of Mycology [Lilian Hawker] has been proposed for membership of the Bristol Scientific Club. I would like to second this proposal.*

Aitken Couper said that no such proposal had been received (!) but as a result of this letter the Past Presidents on 11 December 1965 agreed to hold another ballot, this time requiring 60% for any change. The papers were sent out on 5 January 1966 with a closing date of 3 February 1966. However by 22 January 1966, 72 votes had been received in favour, out of a total membership of 116, passing the 60% required for change. At the club meeting, held on 5 February 1966, the approval of Women's Membership by the Past Presidents was announced to the members.

In a memorandum to the Past Presidents, dated 2 March 1966, ten nominations for membership, including five women were listed. On 5 March 1966, the ten new members were elected and the members informed. Those elected brought the total membership to the maximum of 125.

The five women scientists elected were Dr Beryl Corner (Paediatrician), Dr Kate Dunning (Chemist), Professor Lilian Hawker (Mycologist), Dr Penelope Jenkin (Zoologist) and Dr Anna Mayr-Harting (Bacteriologist). Four of them accepted but one declined!

When Professor Lilian Hawker declined, the Secretaries, Aitken Couper and AJ Willis wrote a carefully worded letter to her inviting her to reconsider.

-----  
11 March 1966

Dear Professor Hawker

The Committee of Past presidents of the Bristol Scientific Club, who unanimously elected you to membership will, we are sure, be very sorry to be informed of your wish to decline election.

During the past six years there has been a strong movement within the Club to bring to an end the convention that membership should be limited to men. There never has been any rule to this effect, because the Club has no rules. The convention was accepted in recent years to avoid any embarrassment which might be caused to

## BRISTOL SCIENTIFIC CLUB

ladies who might be proposed for election, or as invited guests. A referendum four years ago produced an inconclusive result, although a majority was in favour of admitting women to membership. A further referendum this session showed that only a very small minority of members now wished the Club to remain as a male preserve.

This resulted partly from changes in membership, but substantially from a change of opinion of many members. It is manifestly the intention of the Club that its membership shall be open to men and women on an equal footing.

In order that the first women to be elected to membership should suffer no embarrassment, a number of vacancies were reserved to make it possible that a group could be elected at the same time. Five women, who had indicated their willingness to join the Club, were elected together at the last meeting of the Past Presidents.

If, after consideration of the situation outlined above, you still wish to decline election, we shall convey this wish to the Past Presidents at their next meeting in November.

Yours sincerely,

A Couper )  
AJ Willis )                      Honorary Secretaries

Professor Lilian E Hawker,  
Department of Botany,  
University of Bristol.

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In a 'phone call to Aitken Couper, on 17 March 1966, Professor Hawker replied "*that she had no intention of indicating her willingness to join*".

From that time until the end of the 2008-09 session, the list of Ladies elected to membership is given below with their affiliation:

## BRISTOL SCIENTIFIC CLUB

### LADIES ELECTED TO MEMBERSHIP

Date elected	Name & Title	Affiliation
5 March 1966	Dr Beryl Corner	Paediatrician
5 March 1966	Dr Kathleen Dunning	School of Chemistry
5 March 1966	Dr Penelope M Jenkin	Zoologist

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5 March 1966	Dr Anna Mayr-Harting	Bacteriologist
5 December 1970	Dr Dorothy Fisher	Institute of Physics & Physical Society Publishing Office
1 March 1975	Dr Mary D Dixon	Students' Health Service
20 March 1976	Dr Anne Cole	Dept of Biochemistry
6 November 1976	Dr Ann W Cooper	ADAS, Ministry of Agriculture, Fisheries & Food
4 November 1978	Dr Hilary Muirhead	Dept of Biochemistry
1 November 1980	Dr Patience C Barrow	Dept of Biochemistry
1 November 1980	Dr Barbara M Q Weaver	School of Veterinary Science
6 November 1982	Miss Margaret E Gibbons	Deputy Registrar, University of Bristol
5 February 1983	Miss Ann Parkin	Headmistress, Colston's Girls School
29 October 1983	Dr Sheila B Carter	Dept of Physiology
1 February 1986	Dr Dorothy Field	School of Chemistry
7 November 1992	Dr Pauline Primrose	GP in South Bristol
4 March 1995	Dr Juliet Rogers	Rheumatology Unit, BRI
2 March 1996	Dr Priscilla Heard	Dept of Psychology, UWE
6 November 1999	Ms Gillian Thomas	CEO '@ Bristol'
4 November 2000	Prof Wendy Purcell	Dean of the Faculty of Applied Sciences, UWE (BioMedic)
4 February 2005	Dr Ruth Weekes	Headmistress, Redland High School
1 Mar 2008	Lydia Henderson	University of Bristol

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Over the years some lady members have resigned or died as shown in the list below. There were eight lady members on the roll at the end of the 2001-02 session., but only 4 by 2009

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**LADIES ELECTED TO MEMBERSHIP**

Date elected	Name	
5 March 1966	Beryl Corner	Died 4/3/07
5 March 1966	Kathleen Dunning	Died 2000
5 March 1966	Penelope M Jenkin	Resigned 1973
5 March 1966	Anna Mayr Harting	Died June 1974
5 December 1970	Dorothy Fisher	Resigned 1981
1 March 1975	Mary D Dixon	Resigned 1998
20 March 1976	Anne Cole	Resigned 1999
6 November 1976	Ann W Cooper	Resigned 1984
4 November 1978	Hilary Muirhead	
1 November 1980	Patience C Barrow	Resigned 2004
1 November 1980	Barbara M Q Weaver	
6 November 1982	Margaret E Gibbons	Resigned 2004
5 February 1983	Ann Parkin	Resigned 1989
29 October 1983	Sheila B Carter	Resigned 1995
1 February 1986	Dorothy Field	Resigned 1991
7 November 1992	Pauline Primrose	Resigned 1997
4 March 1995	Juliet Rogers	Died 2001
2 March 1996	Priscilla Heard	
6 November 1999	Gillian Thomas	Resigned 2004
4 November 2000	Wendy Purcell	
4 February 2005	Ruth Weekes	Resigned 2006
1 March 2008	Lydia Henderson	Resigned 2009

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### PRESENTATION OF DISCUSSION TOPICS BY LADIES

Over the years, up to the end of the 2001-02 session, ten lady members have presented subjects for discussion. See list below.

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2 November 1968	Beryl Corner	Born too small
5 December 1970	Anna Mayr-Harting	Social Problems in the Bacterial World
6 November 1971	Penelope Jenkin	Flamingoes
1 February 1975	Kathleen Dunning	Colour & Chemical Reactivity
5 February 1983	Barbara Weaver	Comparative Anaesthesia - are the patients as different as they seem?
4 March 1989	Hilary Muirhead	From Synchrotron to Molecular Graphics
3 February 1996	Juliet Rogers	Paleopathology Disease in Archaeological Population
7 November 1998	Priscilla Heard	Hands-on Learning with a little help from the ears
4 March 2000	Gillian Thomas	@ Bristol: Presenting Science to the Public
2 February 2002	Wendy Purcell	Mini-organs in Culture; use of Spheroids in Preclinical Research & Development

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### ADMISSION OF LADIES AS GUESTS

In Aitken Couper's undated note, written after the Centenary Meeting held on 21 November 1987, he wrote, and I repeat:

*In December 1961 the secretaries were authorised to circulate all members with a referendum to establish their views on the admission of women as members **and separately their admission as guests of the club**. This was conducted in February 1962 with an inconclusive result, and no change was made.*

In November 1965, the secretaries judged that the time was ripe for a second referendum, which was held in January 1966, establishing a substantial majority in favour of admitting women both as members and guests.

The above does not reveal the strong feelings of some members of this Gentlemen's Club. After a Dinner Meeting of the members on 3 February 1962, it was suggested that

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*'rules could not be made, or at least not simply by means of a ballot, in a Club with no rules! By the same token, women guests might even now be introduced: there is in fact an operational rule, though it is not in writing'.*

Philip Whiting (his co-secretary, Aitken Couper, was in the United States) sent out the first referendum and ballot paper with these instructions:

(1) *Members are asked to vote on the question whether women scientists should be admitted to membership of the Scientific Club*

(2) *If this majority should be in favour of admitting women, then the conditions under which women might be invited as guests would require consideration. **Members are therefore asked to indicate in the second section whether they would prefer no restrictions to be placed upon women as guests, it being understood that members would invite only guests having a scientific interest in the subject under discussion. As part of this scheme it is suggested that from time to time a special lecture might be arranged as a "ladies night". Alternatively women guests might be excluded or invited by women only.***

The result was inconclusive but it appears likely that the 51 members who supported the admission of women as members were the 51 who voted for women as guests.

The ballot paper for the second referendum, dated 5 January 1966, carried this notice from the Secretaries to the members:

In deciding that the vote should be taken only on the question of admitting women scientists to membership of the club, the Past Presidents wish to remind all members that guests invited to attend meetings should be persons with a scientific interest in the topic for discussion. **This principle is important because membership of the club is limited by the number of persons who can comfortably hear the introduction and take part in the discussion of the topic for the meeting.**

Upon the understanding that members will continue to apply this principle when inviting guests to attend meetings of the club, there is no reason to consider the admission of women as guests separately from women's membership.

This time the admission of women as members and as guests was carried by a comfortable majority. Only a very small minority of the members wished the Club to remain as a male preserve, a substantial number of members had changed their opinion.

In 2002, with the current low level of membership, guests, be they ladies or gentlemen, will I am sure be welcomed to the Club Dinner Meetings.

It is interesting that Aitken Couper recorded in his notes that Professor PJ Randle, the newly appointed Professor of Biochemistry, was elected on 6 March 1965. He was present that evening and was accompanied by a lady guest! Apparently,

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nothing was said at the time.

Another lady attending before the convention to admit ladies was adopted was Jean Littler. Professor Mark Whiting, elected in 1965, had not realised that lady guests were not allowed. He had invited both John and Jean Littler to the Meeting held on 5 February 1966 (the night the members discussed details of the second referendum). When this unwritten rule was pointed out to him, he immediately offered to take John and Jean Littler out to dinner elsewhere. No one can say whether this situation required an emergency meeting of the Past Presidents but they were allowed to remain.

I have observed that in any document from the Secretaries, the mention of a rule or rules is carefully avoided and euphemisms, like conventions, principles, custom and practice, are always used.

It is interesting to compare the above two events with an incident recorded by Cecil Powell in his booklet **'Concerning The Bristol Madrigal Society'** published in May 1948. The Bristol Madrigal Society was founded in 1837 as a male choir, with the Cathedral boys singing the treble line. Ladies were not admitted until 1946. In fact, before 1946 only one lady had ever been present at a rehearsal of The Bristol Madrigal Society.

Cecil Powell wrote:

*In 1913 one of the newspapers said: "Benet's 'Flow, O my tears' (which was sung at that Ladies' Night) was not an especially beautiful madrigal, but it must ever possess an attraction for the choir since it had an association with Miss Ellen Terry. The celebrated actress, to whom madrigal singing is well nigh a passion, chanced to be in Bristol on a rehearsal night of the Society, and was introduced at the Montague Hotel, though informed that one of the rules was no lady should be admitted to the room while the rehearsal proceeded, and she must listen in an adjoining apartment. Gallantry on the part of the President and his colleagues contrived that it should be in the same room as the choir, and it was put to the members whether the rules might be relaxed. An affirmative to the resolution was at once forthcoming and Miss Terry heard with special delight Benet's 'Flow, O my tears', saying she would always treasure the remembrance of its interpretation."*

## SUBJECTS PRESENTED

From the inauguration of the Club, four subjects per year have been presented bringing the total number to over 400. The topics discussed have been many and varied.

Reference has already been made to the fact that the talks always kept the members up to date. This can be illustrated by a selection of some examples.

Electric Light was introduced to Bristol between 1890 and 1900. On 27 March 1906 G Thomas Davies spoke on The measurement of Illumination and on 6 March 1909 H Faraday Proctor (Engineer in charge of Bristol Electric Light Works) spoke on Recent Developments in Bristol Electrical Undertakings.

At the Centenary Meeting Professor Sir Alfred Pugsley spoke about an advertisement in 1914 for the Clifton Down Hotel, which ran 'Every room has Electric Light and the Hotel provides every comfort without ostentation'!

The subject of Colour Photography was presented as early as 31 October 1908 by Bertram Rogers.

Man at High Altitudes was presented by Robin Brocklehurst on 1 March 1933. He was the Professor of Physiology and also a mountaineer. He would have referred to the attempts made in 1921 & 1924 to climb Mount Everest and the new attempt proposed for 1933. That year also marked the first flight over Everest.

The expected arrival of Halley's Comet in 1910 was certain to have been mentioned by G Crawford who presented Comets on 23 October 1909. On 5 November 1988 Alan Worley spoke about Celestial Fireworks - the 1987 Supernova. That evening John Littler provided a Fireworks Dinner Menu. It was Gunpowder Soup, The Game is up Pie and the speciality, marking the Guy Fawkes event, the serving of Bombe Glacee. After the dinner, as a prelude to his notices, he also set off a small black powder flare, which almost singed my eyebrows!

John Littler, inspired by the liberalisation of the telephone industry, presented Telephones - Present & Future on 2 February 1984. This was a demonstration lecture ably assisted by Tony Makepeace, which attracted over 120 members and their guests. It was probably one of the best attended meetings ever.

Without doubt the most important and up to the minute talk given to members of the Club was at the Special Meeting held on 24 January 1970, when Professor Geoffrey Eglinton spoke about The Chemical Composition of Lunar Rocks. This was the analysis of dust brought back to earth by the Apollo Spacecraft members from the Moon.

After WW1 Professor Francis Francis spoke of his wartime experiences. His title Chemistry and the War was presented on 8 November 1919.

The most recent 'up to the minute' talk was given by Professor Douglas Everett. It concerned his WW2 work as a Member of the Special Operations Executive (SOE).



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On 3 November 2001 he was able to relate his fascinating story following the relaxation of the Official Secrets Act.

There have been a number of SCI Members, who as members of the Bristol Scientific Club have presented subjects for discussion since 1900. These are listed in Appendix (E)

All the subjects from 1900 are listed in the file prepared from the Programme Cards. (Appendix G) It is interesting to select some subjects and put them into rough groups. These are given alphabetically.

### AGRICULTURE

3 February 1934	Better Fruit	GT Spinks
4 February 1939	Scab Diseases of Apple Trees	RW Marsh
2 March 1946	Mechanical Control of Crop Pests & Diseases	HGH Kearns
3 February 1951	New Developments in Fungicides	RW Marsh
2 March 1957	Cider making as a subject for research	Alfred Pollard
7 November 1959	New Developments in Fungicides	David Woodcock
2 February 1980	Agriculture & the Environment	Dick Russell

### CHEMISTRY

6 February 1908	Colloidal Chemistry	James W McBain
2 February 1929	Geber, the first great Chemist	EJ Holmyard
1 February 1930	Flames	WE Garner
12 November 1930	The Origin of Chemistry	M Nierenstein
8 February 1947	About & concerning Sulphuric Acid	Stanley Robson
4 March 1950	Penicillin: The Early Story	Wilson Baker
2 February 1957	Hysteresis: a physical interpretation & some possible biological implications	Douglas Everett
6 March 1965	Catalysis	Frank S Stone
6 February 1971	Colloids - Black Magic or Science?	Ron H Ottewill
2 February 1974	A Chemist looks at Oriental Rugs	Mark C Whiting
1 February 1975	Colour & Chemical Reactivity	Kate Dunning
1 March 1997	Jelly & Cream or some aspects of Modern Gel Technology	Brian Vincent
5 December 1998	Polymers at Interfaces: Chains & Bondage	Terence Cosgrove

### DINOSAURS

7 February 1914	Prehistoric Man	C Lloyd Morgan
5 March 1921	Prehistoric Insects	H Bolton
25 October 1930	Fossil Reptiles	SH Reynolds
10 December 1938	Dinosaurs	WF Whittard
2 March 1991	Exceptionally Preserved Fossils	Derek EG Briggs
4 November 1995	Extinctions: the past is the key to the present	Mike J Benton

### EARTHQUAKES & VOLCANOES

9 March 1907	Volcanoes	SH Reynolds
10 February 1911	Earthquake records	Arthur M Tyndall
1 November 1980	Earthquakes during the past 5 million years	PL Hancock
5 December 1992	Understanding Volcanic Eruptions	RSJ Sparks

## BRISTOL SCIENTIFIC CLUB

### EDUCATION

2 February 1924	The Development of Scientific and Technical Instruction	HE Boothroyd
1 December 1973	Higher Education for what?	RW Bolland
2 December 1978	Traditional to Modern in Science Teaching	Ian B Hopley
4 December 1982	Education continues - OK?	EJ Thomas
3 February 1990	Balancing Science, a view from the Chalkface	Albert Pearson

### ENGINEERING

Professor Sir Alfred Pugsley at the Centenary Meeting said that he had calculated that Engineers had given seven talks between the two World Wars and 20 since 1945. The latter he attributed to a wave of new Professors! A number of Engineering talks are covered in the Flight Section. Talks by Engineers included:

13 March 1937	Testing of Structures	JF Baker
This concerned the first steel framed building in London, the Ritz Hotel.		
6 November 1937	Domestic Appliances of the 18 <sup>th</sup> & 19 <sup>th</sup> Centuries	JDA Gray
7 December 1946	Modern Trends in Structural Science	AG Pugsley

### FLIGHT

5 March 1949	Aeronautics - Larger & Faster	AR Collar
2 December 1961	Jet Engines	Stan G Hooker
7 March 1964	Vertical take-off Aircraft	R Hafner
7 February 1981	Aero engine Prospects	PH Young
6 December 1997	The Tyne Aero engine	L Haworth
2 December 1989	Penetrating Radiations make Transparent Engines	PAE Stewart
1 February 1992	The contribution of Power Jets Ltd to Jet Propulsion	GBR Feilden
5 February 2000	Supersonic Transport Propulsion	BW Lowrie

### MEDICINE

At the Centenary Meeting, Professor Bruce Perry spoke about the early Secretaries. Patrick Watson Williams, an ENT Surgeon, was a Secretary in 1900, as the author of a large text book. EHE Stack, a Surgeon at the General Hospital, who was a Club Secretary from 1906-1920 but never gave a paper! Another Secretary was J Odery Symes, a physician, who presented Bacteria & the healthy Body on 4 November 1905.

Professor Perry said that a staunch supporter of the Club was G Munroe Smith, who wrote a monumental history of the Bristol Royal Infirmary. He was one of a number of members who was invited to give more than one talk.

16 February 1901	Imagination	G Munroe Smith
28 January 1905	Character & Instinct	G Munroe Smith
22 March 1913	Dinners Past & Present	G Munroe Smith

One wonders whether this last talk was a complaint?

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Some other Medical subjects discussed were:

15 February 1902	Death	Stanley Kent
6 November 1954	Normal & abnormal growth in children	A Victor Neale

Professor Perry said that the speaker was the first Professor of Child Health. That evening, Professor Perry was the President and he remembered clearly that Professor Neale started his second box of slides at 10 30pm. He had no sense of time and was well known as the 'late' Professor Neale!

2 March 1963	Antibiotics	WA Gillespie
--------------	-------------	--------------

5 March 1966	Aspects of Public Health in other Countries	RC Wofinden
--------------	---	-------------

The speaker was Professor of Preventative Medicine and Medical Officer of Health for Bristol.

2 November 1968	Born too small	Beryl Corner
-----------------	----------------	--------------

Beryl Corner, a Paediatrician at the Children's Hospital, was one of the five original lady members elected to the Club and with this talk became the first lady to present a subject to the members.

1 February 1997	The Discovery & Background to a Disease	JR Clamp
-----------------	---	----------

### MUSIC

2 November 1900	Mind in relation to Music	Cedric Bucknall
-----------------	---------------------------	-----------------

7 March 1908	Sensations, mainly musical	JA Nixon
--------------	----------------------------	----------

1 December 1962	Physics of Musical Instruments	David F Gibbs
-----------------	--------------------------------	---------------

7 December 1985	The Cello, Musical Instrument or Vibrating Structure	RD Adams
-----------------	---	----------

4 February 1995	Wheatstone, Inventor Extraordinary, and the English Concertina	Peter Cox
-----------------	---	-----------

### NUCLEAR POWER

3 November 1945	Atomic Power	NF Mott
-----------------	--------------	---------

4 November 1967	Nuclear Power - the next 10 years	CP Haigh
-----------------	-----------------------------------	----------

1 March 1975	Nuclear Power & Predicting the Future	AW Merrison
--------------	---------------------------------------	-------------

7 November 1992	The prospects for Nuclear Power	Derek Dominey
-----------------	---------------------------------	---------------

### SCIENCE

Sir Charles Frank described these two subjects as 'Science with a broader Continental meaning'.

8 November 1924	The Crusades from the Muslim point of view	De Lacy O'Leary
-----------------	--	-----------------

20 March 1926	Berber Tribes of South Tunisia	WW Jervis
---------------	--------------------------------	-----------

### SCIENCE & THE PUBLIC

6 December 1947	Museums & Science	FS Wallis
-----------------	-------------------	-----------

31 October 1987	Exploring the Exploratory, A tour guided by	Richard L Gregory
-----------------	---	-------------------

5 December 1998	Hands on learning, with a little help from the ears	Priscilla Heard
-----------------	--	-----------------

4 March 2000	@Bristol, Presenting Science to the Public	Gillian Thomas
--------------	--	----------------

### ZOOLOGY

26 November 1927	The Construction & Management of the Clifton Aquarium	Richard C Clarke
------------------	--	------------------

1 February 1964	Wild Monkeys	KRL Hall
-----------------	--------------	----------

6 November 1971	Flamingoes	Penelope Jenkin
-----------------	------------	-----------------

## MEMBERSHIP

The Bristol Scientific Club is not a University Club but the membership has always had a strong University bias, with Chemistry, Physics, Zoology, Geology, Medicine and Engineering being the prominent affiliations among the membership. Other members' affiliations include those from local industry, commerce, schools and colleges.

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It would be interesting to identify members who have achieved scientific eminence by their election to Fellowship of the Royal Society but information in the Club's records is sparse. However, from the list of the 80 members for 2002-2003, and other notes there were fourteen members with FRS after their name.

Professor DEG Briggs FRS  
Professor RN Dixon FRS  
Professor AR Lang FRS  
Professor G Eglinton FRS  
Professor J Enderby FRS  
Professor D H Everett FRS\*\*\*\*  
Professor RL Gregory CBE, FRS

\*rejoined during year

\*\*\* elected FRS May 2003

Prof T Simpson FRS became a Member in March 2004

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Professor F Gutfreund FRS  
Professor JE Harris FRS\*\*  
Professor M Hart CBE, FRS  
Professor J MacMillan FRS\*  
Professor RH Ottewill FRS  
Professor JW Steeds FRS  
Prof PNT Wells FRS \*\*\*

\*\* resigned during year

\*\*\*\* died during year

One notable member of the Club must be Professor Wilson Baker FRS, who presented Penicillin: The Early Story to the Club on 4 March 1950. He was born on 24 January 1900 and died on 3 June 2002 at the age of 102!. Not only was he the oldest member of the Bristol Scientific Club, he was also the longest lived FRS.

He was elected FRS in 1946, thus he had achieved 56 years membership of this elite group of scientists up to the date of his death. In 1996, Professor Douglas Everett MBE, FRS organised a party to celebrate Wilson Baker's 50 years as FRS and at that party, presented a Scroll from the Royal Society to mark this achievement. There have been only nine such recipients.

Wilson Baker was a founder committee member of Oxfam and he was a Quaker.

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Arrowsmith's Dictionary of Bristol, 2<sup>nd</sup> Edition, 1906 carried an entry from the Bristol Scientific Club Secretaries, Francis Francis and J Odery Symes, indicating that the inaugural membership (1886) was limited to fifty in number.

A survey of the annual membership numbers from 1963-2002, reveals that in 1963 there were 108 members. By 1966, when Ladies were admitted to membership, it is recorded that a maximum of 125 had been set. However, by 1972 membership had

## BRISTOL SCIENTIFIC CLUB

increased to 150, the highest number recorded. While not all members attend every meeting, the Senior Common Room (SCR) on the 4<sup>th</sup> Floor of the Senate House was well able to accommodate the large number.

From 1976-81 meetings were held at the Royal Hotel where there was evidently less space and the Hotel Management set a limit of 85 for Dinner in the Avon Lounge.

In October 1978 the Secretaries had to announce to members that the first 85 notifications received would be booked in the Avon Lounge, while cards received later would receive the same menu but in the Dining room!

The membership remained at around 125 until 1995 when it had fallen to 110 and by 1999 it had dropped again to a low of 77. Since then it has settled out around 80.

See APPENDIX (F)

Annual Membership Numbers

In 1999 the Secretaries, John Littler & Matt Nichols, introduced an incentive scheme to recruit new members. They wrote in the annual letter to members dated September 2000:

*As always, nominations for new members are invited. Our numbers are now about 81, an increase on last year. We lose a few members each year and if you know any bright young scientists who could give us a talk and contribute to the discussions, please let us know, and invite them along to meet the members one Saturday night. Formal nominations should be sent to either Secretary and be accompanied by a short CV.*

*The special incentive introduced last year may or may not have been a major factor but as numbers did increase we are repeating it: if you introduce a guest, who is subsequently elected, you will be credited with a free dinner.*

*We should like to see the membership up to 100 again, and although we appreciate that many suitable people are under pressure at work these days, if we all make an effort to think of one possible new member, we should easily reach that target.*

Let's hope that new members will be found to keep the Club moving forward in the 21<sup>st</sup> Century. Sir Charles Frank ended his reminiscences at the 'Centenary' meeting with these words: **'I expect the Bristol Scientific Club to carry on for another 100 years!'**

## **APPENDICES**

## Appendix A

### SESSION NUMBERING

DATE	SESSION
1886.87	( 1) Inaugural Meeting October 1886 and 1 <sup>st</sup> Session
1887-88	( 2) 1 <sup>st</sup> Anniversary of Foundation
1888-89	( 3)
1889-90	( 4)
1890-91	( 5)
1891-92	( 6) 5 <sup>th</sup> Anniversary
1892-93	( 7)
1893-94	( 8)
1894-95	( 9)
1895-96	(10)
1896-97	(11) 10 <sup>th</sup> Anniversary
1897-98	(12)
1898-99	(13)
1899-1900	(14)
1900-01	(15)
1901-02	(16) 15 <sup>th</sup> Anniversary
1902-03	(17)
1903-04	(18)
1904-05	(19)
1905-06	(20)
1906-07	(21) 20 <sup>th</sup> Anniversary
1907-08	(22) <b>12 October 1907 21<sup>st</sup> Anniversary of Foundation</b> <b>Incorrectly numbered 21<sup>st</sup> Session!</b> <b>Before this no Session number was recorded</b>

It is too late to change, so the incorrect numbering continues from:

1907.8	21	
1908.9	22	
1909-10	23	and so on

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**Appendix B**  
**SOCIETY OF CHEMICAL INDUSTRY**  
Bristol & South Wales Section Committee 1885

CHAIRMAN

**Professor William Ramsay**      b 2 October 1852      d 23 July 1916

VICE-CHAIRMAN

**Philip John Worsley**      b 29 October 1834      d 7 March 1917

LOCAL SECRETARY & TREASURER

EG Marks

COMMITTEE

Robert W Atkinson

George Dobson

**Dr Alfred C Fryer** (retired from Alkali Inspectorate 31 July 1920)

**Thomas Morgans**

**Alfred Capper Pass**      b July 1837      d Early Autumn 1905

Fewster Player

William Pringle

**Albert Edwin Reed**      b 13 January 1896      d 21 February 1920

**George Frederick Schacht**

**William Ashwell Shenstone**      b 1 December 1850      d 3 February 1908

**Professor Claude Metford Thompson**      b 1855      d 4 January 1933

**William Windus** (started at Netham 19 March 1878  
Age approx 23, therefore DOB approx 1855  
Spoke at Section AGM 15 March 1923  
Date of death unknown)

Notes:      Section closed due to inactivity 1889  
         Underlined      = Members still alive when Section reformed in 1917  
         **Bold Type**      = Members living in Bristol



## Appendix C

### SCI BRISTOL & SOUTH WALES SECTION MEMBERS LIVING IN BRISTOL

#### Details from Journal of Society of Chemical Industry (JSCI) 31 January 1888

Board, JT	Distillery, Cheese Lane, Bristol
Coomber, Thos	9 Osborne Road, Clifton
Dunscombe, MW	St Augustines Parade
Evans, WN	66 Stackpole Road
Fryer, Dr AC	Cornwallis Lodge, Clifton
Gifford, Henry J	16 Collingwood Road, Redland
Gunn, WL	Broad Plain Soap Works
Harris, Evan R	Luckwell House, Bedminster
Harrison, GD	Netham Chemical Works
Jones, W Arthur	Kenwith Lodge, Redland
Lawson, Arthur J	Marsh Soap Works
Morgans, Thomas	The Guildhall
Owen, Thos	Hazlehurst, Cotham Park
Pass, AC	Rushmer House, Durham Down, Clifton
Proctor, CW Cope	Heathercliffe, Clifton Down
Shenstone, WA	Clifton College
Stevens, WJ	Marsh Soap Works
Stoddart, F Wallis	Weston Counties Laboratory
Thomas, C	Broad Plain Soapworks
Thomas, HE	Hyde Lodge, Redland
Waterfall, WB	c/o Avon Manure Co

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Webster CS Stanford	Malvern House, Redland
Windus W	15 Vyvyan Terrace, Clifton
Worsley, PJ	Rodney Lodge, Clifton
Young, Dr Sydney	13 Aberdeen Terrace, White Ladies Road

## BRISTOL SCIENTIFIC CLUB

### Appendix D

Meetings of the Bristol Scientific Club  
have been held at the following Venues.

Inaugural Session	1886-87	No information available
1 <sup>st</sup> to 13 <sup>th</sup> Session	1887-1900	No information available
14 <sup>th</sup> to 27 <sup>th</sup> Session	1900-14	Clifton Down Hotel
(No meetings held 1914-19 during WW1)		
28 <sup>th</sup> Session	1919-20	Grand Spa Hotel
29 <sup>th</sup> & 30 <sup>th</sup> Session	1920-22	University Union, Fort House
31 <sup>st</sup> & 32 <sup>nd</sup> Session	1922-24	Victoria Rooms, Clifton
33 <sup>rd</sup> Session	1924-25	1924 Lloyd's Café, Portland Place, Clifton 1925 Refectory, University Union, Victoria Rooms, Clifton
34 <sup>th</sup> to 42 <sup>nd</sup> Session	1925-34	Refectory, University Union, Victoria Rooms, Clifton
43 <sup>rd</sup> Session	1934-35	(No card, therefore no details available)
44 <sup>th</sup> to 47 <sup>th</sup> Session	1935-39	Royal Hotel, College Green
48 <sup>th</sup> Session	1939-40	(No details. No meetings held during WW2)
49 <sup>th</sup> to 52 <sup>nd</sup> Session	1945-49	Royal Hotel, College Green
53 <sup>rd</sup> to 66 <sup>th</sup> Session	1949-63	SCR, Bristol University, Queen's Road
67 <sup>th</sup> to 79 <sup>th</sup> Session	1963-76	SCR, 4 <sup>th</sup> Floor, Senate House, Tyndall Avenue
80 <sup>th</sup> to 84 <sup>th</sup> Session	1976-81	Royal Hotel, College Green
85 <sup>th</sup> to 89 <sup>th</sup> Session	1981-86	Hawthorns Hotel, Woodland Road
90 <sup>th</sup> Session	1986-87	Senate House, Tyndall Avenue
91 <sup>st</sup> Session	1987-88	First Meeting: Victoria Rooms Second and subsequent meetings: University Refectory Conference Suite, Queen's Road
92 <sup>nd</sup> to 96 <sup>th</sup> Session	1988-93	University Conference Suite, Queen's Road

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97 <sup>th</sup> to 109 <sup>th</sup> Session	1993-2006	The Hawthorns, Woodland Road
110 <sup>th</sup> Session	2006-07	The Bristol Golf Club
111 <sup>th</sup> Session	2007-08	St Monica's Oatley House and Trinity College
112 <sup>th</sup> to 113 <sup>th</sup> Session	2008-10	Trinity College

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## Appendix E

### Bristol Scientific Club Members who have introduced subjects for discussion and were also members of the Society of Chemical Industry.

21 December 1900	Francis FRANCIS Chemistry of three dimensions	(University College, Bristol) See also 1919
14 December 1901	Sydney YOUNG Liquefaction of gases	(University College Bristol, Prof 1887-1904)
2 December 1905	Morris F TRAVERS Very low temperatures	(University College Bristol, Prof 1904-07) See also 1932
2 February 1907	William A SHENSTONE Disintegration of Matter	1885 Committee
12 October 1907	Sir William RAMSAY An Address!	Chairman 1885 Committee (University College Bristol, Prof 1880-1887) (SCI President 1903-04)
8 November 1919	Francis FRANCIS Chemistry and the War	Vice-Chairman 1917-36
2 February 1929	E J HOLMYARD Geber, the first Great Chemist	1924-26 Committee
1 February 1930	W E GARNER Flames	Vice-Chairman 1936-54 Chairman 1956-58 (University of Bristol, Prof 1926-54)
10 December 1932	Morris F TRAVERS British Fuel Problems	Vice-Chairman / Chairman 1934-35
14 November 1936	F W RIXON Telepathy	Hon Treasurer 1917-?
8 February 1947	Stanley ROBSON About and concerning sulphuric acid	Chairman 1929-31 & 1945-46 (SCI President 1949-51)
4 March 1950	Wilson BAKER Penicillin, the early story	Vice-Chairman 1954-65 (University of Bristol, Prof 1945-56)
2 February 1957	Douglas H EVERETT Hysteresis: a physical interpretation and some possible biological implications	Vice-Chairman 1965-83 (University of Bristol, Prof 1954-83)
March 1957	Alfred POLLARD Cider making as a subject for research	Chairman 1968-70
7 November 1959	David WOODCOCK New Organic Fungicides	Pesticides Group Representative

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9 December 1972	Anthony K BARBOUR Environmental aspects of non-ferrous metal productions	Vice-Chairman 1990-91 and 1997-99 Chairman 1991-93 and 1999-2001 See also 2002
2 February 1980	Richard D RUSSELL Agriculture and the Environment	Agriculture & Environment Group
1 November 1986	S D LUBETKIN Buildings, Blue Glass and BBC Micros	1986-89 Committee
3 March 1990	Raymond A HOLLAND More than an interest in Science – the Worsley Story	Chairman 1984-87 SCI National Chairman of Council 1996-1999
1 March 1997	Brian VINCENT Jelly & Cream, or Some Aspects of Modern Gel Technology	Colloid & Surface Chemistry Group
4 March 2001	Ian DONALDSON Minerals, Chemical and Local Industries or Vinegar and Smokescreens	2002-05 Committee
3 November 2001	Douglas H EVERETT Science, Subversion and Sabotage	Vice-Chairman 1965-83
2 March 2002	Tony (Joe) BARBOUR Chemistry – Friend or Foe?	See 1972 above

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## Appendix F

### ANNUAL MEMBERSHIP NUMBERS

October 1886 Inaugural membership said to have been 50 max

October 1963	108
1964	111
1965	112
1966	120
1967	123
1968	unknown
1969	134
1970	142
1971	141
1972	150
1973	141
1974	137
1975	134
1976	135
1977	129
1978	120
1979	126
1980	122
1981	126
1982	128
1983	124
1984	129
1985	131
1986	123
1987	127
1988	128
1989	unknown
1990	130
1991	135
1992	unknown
1993	unknown
1994	122
1995	110
1996	104
1997	99
1998	78
1999	77
2000	81
2001	83
2002	80
2003	81
2004	75
2005	76
2006	81

Average actual attendance 2000-2006 was about 40

## **Appendix G**

### **SPEAKERS AND SUBJECTS FROM 1900**

#### **14<sup>th</sup> Session 1900-1901**

2 November 1900	Cedric BUCKNALL Mind in Relation to Music
21 December 1900	Francis FRANCIS Chemistry in Three Dimensions
16 February 1901	Munroe SMITH Imagination
16 March 1901	R L LEIGHTON The Fine Arts in relation to Science

#### **15<sup>th</sup> Session 1901-1902**

16 November 1901	Lloyd MORGAN Measurement of Sensation
14 December 1901	Sydney YOUNG Liquefaction of Gases
15 February 1902	Stanley KENT Death
15 March 1902	Cyril WALKER Eyesight and Civilisation

#### **16<sup>th</sup> Session 1902-1903**

1 November 1902	F R BARRELL Aether and Matter
6 December 1902	R M FERRIER Ice Breaking Steamers
7 February 1903	E L USHER The Scientific Side of Brewing
14 March 1903	K WILLS Phototherapy



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### **17<sup>th</sup> Session 1903-1904**

7 November 1903	D R RINTOUL On Bodies smaller than the Atom
5 December 1903	W W SQUIRE Monoliths
30 January 1904	F BEAMES Smell
5 March 1904	S H REYNOLDS Geology and Scenery

### **18<sup>th</sup> Session 1904-1905**

5 November 1904	G CRAWFORD The Use and Abuse of Statistics
3 December 1904	G BREBNER Some Problems in Fertilization
28 January 1905	Munroe SMITH Character and Instinct
4 March 1905	A VAUGHAN Geology in its relation to Evolution

### **19<sup>th</sup> Session 1905-1906**

4 November 1905	J Odery SYMES Bacteria and the healthy Human Body
2 December 1905	Morris F TRAVERS Very Low Temperatures
27 January 1906	G Thomas DAVIES The Measurement of Illumination
24 February 1906	H F MOLE The Organ of Hearing

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### **20<sup>th</sup> Session 1906-1907**

3 November 1906	Julius WERTHEIMER Experiments with Water Finders
8 December 1906	H CLISSOLD The Sun
2 February 1907	William A SHENSTONE Disintegration of Matter
9 March 1907	S H REYNOLDS Volcanoes

### **21<sup>st</sup> Session 1907-08**

12 October 1907	Sir William RAMSAY Address
23 November 1907	J H PRIESTLEY Application of Electricity in Agriculture
6 February 1908	James W McBAIN Colloidal Chemistry and Life Processes
7 March 1908	J A NIXON Sensations, mainly Musical

### **22<sup>nd</sup> Session 1908-1909**

31 October 1908	Bertram ROGERS Colour Photography
5 December 1908	F BEAMES Syntax and Evolution
6 February 1909	A L FLEMMING Heredity
6 March 1909	H Faraday PROCTOR Recent Developments in Bristol Electrical Undertakings

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### **23<sup>rd</sup> Session 1909-1910**

23 October 1909	G CRAWFORD Comets
4 December 1909	I Walker HALL Nationalisation of Research
5 February 1910	W A KNIGHT Liquid Crystals
12 March 1910	Cyril Walker Retinal After-Images

### **24<sup>th</sup> Session 1910-1911**

22 October 1910	F H EDGEWORTH Parthenogenesis - Natural and Artificial
3 December 1910	J H PRIESTLEY Immunity to Disease - Is it a Possibility for the Plant?
10 February 1911	Arthur M TYNDALL Earthquake Records
11 March 1911	W A SMITH Paracelsus

### **25<sup>th</sup> Session 1911-1912**

26 October 1911	E RUSSELL Food Adulteration
2 December 1911	E C ATKINSON The Geometry of Shells - with Models
10 February 1912	D S DAVIES An Enemy of the People
9 March 1912	J Michell (sic) CLARKE Fatigue

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### **26<sup>th</sup> Session 1912-1913**

2 November 1912	E B LUDLAM Modern Views of Chemical Change
30 November 1912	O V DARBISHIRE Limiting Conditions of Plant Life
8 February 1913	H CHITTY Automatism
22 March 1913	G Munroe SMITH Dinners - Past and Present

### **27<sup>th</sup> Session 1913-1914**

1 November 1913	F BEAMES Physical or Psychical?
6 December 1913	M NIERENSTEIN Chemical Therapeutics
7 February 1914	C Lloyd MORGAN Prehistoric Man
7 March 1914	O V DARBISHIRE The Origin of Life

### **28<sup>th</sup> Session 1919-1920**

(No meetings held during World War 1)

8 November 1919	Francis FRANCIS Chemistry and the War
6 December 1919	Arthur M TYNDALL The Structure of the Atom
31 January 1920	O V DARBISHIRE Symbiosis
6 March 1920	A L FLEMMING Ductless Glands

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### **29<sup>th</sup> Session 1920-1921**

30 October 1920	C Lloyd MORGAN Consciousness and the Unconscious
4 December 1920	J M Fortescue BRICKDALE Accessory Food Factors or Vitamines (sic)
5 February 1921	J A C MUIRHEAD Natural Climatic Regions of the World
5 March 1921	H BOLTON Prehistoric Insects

### **30<sup>th</sup> Session 1921-1922**

5 November 1921	G A BUCKMASTER Oxygen from a Physiological Aspect
3 December 1921	P G J GUTERBOCK The Early Days of Scientific Metallurgy
4 February 1922	S H REYNOLDS Bristol Geology and Scenery
4 March 1922	J A NIXON On the Wayside between Abbeville and Cologne

### **31<sup>st</sup> Session 1922-1923**

4 November 1922	M NEIRENSTEIN Iatrochemistry
2 December 1922	C D BROAD What Philosophy is about
3 February 1923	J Odery SYMES The Problem of Mental Deficiency
3 March 1923	W D HENDERSON Determination of Sex

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### **32<sup>nd</sup> Session 1923-1924**

3 November 1923	Edward FAWCETT Local Ecclesiastical Architecture
8 December 1923	E RUSSELL Preservatives, their Nature and Use
2 February 1924	H E BOOTHROYD The Development of Scientific and Technical Instruction
1 March 1924	O C M DAVIS Some Medical Aspects of Molecular Architecture

### **33<sup>rd</sup> Session 1924-1925**

8 November 1924	De Lacy O'LEARY The Crusades from the Muslim point of view
13 December 1924	C F COOMBS The Heart Beat
13 January 1925	R C FAWDRY Ancient Egypt
7 March 1925	W R ACKLAND Dental Pathology in its relation to the rest of the body

### **34<sup>th</sup> Session 1925-1926**

31 October 1925	S H PIPER X-Rays and Chemical Analysis
28 November 1925	Bertram ROGERS Privateering
6 February 1926	E Watson WILLIAMS Country Life in the England of William 1
20 March 1926	W W JERVIS Berber Tribes of South Tunisia

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**35<sup>th</sup> Session 1926-1927**  
(No details available)

**36<sup>th</sup> Session 1927-1928**

5 November 1927	T WALLACE The Nutrition of Fruit Trees
26 November 1927	Richard C CLARKE The Construction and Management of the Clifton Aquarium
28 January 1928	H W TURNER The Geology of South-West Cornwall
25 February 1928	Arthur M TYNDALL The Reflection and Absorption of Sound

**37<sup>th</sup> Session 1928-29**

27 October 1928	George PARKER Tyndall's Park and the Sieges of Bristol
24 November 1928	M SKENE The Real Chimaera
2 February 1929	E J HOLMYARD Geber, the first Great Chemist
2 March 1929	(Speaker and Subject to be announced later)

**38<sup>th</sup> Session 1929-1930**

26 October 1929	G N NICKLIN The Manufacture and Metallurgy of Printing Metals
23 November 1929	H E BOOTHROYD Education for Industry and Commerce
1 February 1930	W E GARNER Flames
1 March 1930	J E LENNARD-JONES Flight

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### **39<sup>th</sup> Session 1930-1931**

25 October 1930	S H REYNOLDS Fossil Reptiles
29 November 1930	A J S PIPPARD Airships, Past and Present
31 January 1931	O GROVE Drinks
4 March 1931	C F COOMBS Susceptibility to Infection

### **40<sup>th</sup> Session 1931-32**

7 November 1931	J A NIXON Food Value and Food Prices
5 December 1931	S SMITH Some Problems of Evolution
6 February 1932	C H WALKER The Eye in Sport
5 March 1932	Eric Watson WILLIAMS Things we swallow

### **41<sup>st</sup> Session 1932-1933**

12 November 1932	M NIERENSTEIN The Origins of Chemistry
10 December 1932	Morris F TRAVERS British Fuel Problems
4 February 1933	N L ROSS-KANE Photo-Electric Cells
11 March 1933	R J BROCKLEHURST Man at High Altitudes



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**42<sup>nd</sup> Session 1933-1934**

11 November 1933	W W JERVIS Greenland
9 December 1933	S H PIPER Structures of Organic Fibres and Plant Cells as shown by X-Rays
3 February 1934	G T SPINKS Better Fruit
10 March 1934	H H CARLETON (Subject not quoted)

**43<sup>rd</sup> Session 1934-1935**  
(No details available)

**44<sup>th</sup> Session 1935-1936**

2 November 1935	Richard C CLARKE Observations on the Habits of Primates
7 December 1935	A E TRUEMAN Recent Investigations of Coal Seams
8 February 1936	H J ORR-EWING Problems of a School Doctor
March 1936	(Date, Speaker and Subject to be announced later)

**45<sup>th</sup> Session 1936-1937**

14 November 1936	F W RIXON Telepathy
5 December 1936	T B DAVIE (sic) The Bushmen, the Hottentots and the Bantu of South Africa
13 February 1937	L OGILVIE Musing of a Plant Doctor
13 March 1937	J F BAKER The Testing of Structures

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### **46<sup>th</sup> Session 1937-1938**

6 November 1937	J D A GRAY Domestic Appliances of the 18 <sup>th</sup> and 19 <sup>th</sup> Centuries
11 December 1937	F S WALLIS Water Finding - Orthodox and Unorthodox Methods
5 February 1938	T MALKIN Recent Work on Fats
5 March 1938	C Bruce PERRY The Mystery of Acute Rheumatism

### **47<sup>th</sup> Session 1938-1939**

5 November 1938	L Harrison MATTHEWS Research on Whales
10 December 1938	W F WHITTARD Dinosaurs
4 February 1939	R W MARSH Scab Disease of Apple Trees
11 March 1939`	Arthur M TYNDALL Artificial Radioactivity and its Applications

### **48<sup>th</sup> Session 1939-1940**

(No details available. No meeting held until end of World War 2)

### **49<sup>th</sup> Session 1945-46**

3 November 1945	N F MOTT Atomic Power
1 December 1945	L Harrison MATTHEWS Radar
2 February 1946	John E Harris Molecular Biology
2 March 1946	H G H KEARNS Mechanical Control of Crop Pest and Diseases

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### **50<sup>th</sup> Session 1946-1947**

2 November 1946	Tom F HEWER Syphilis in the Tropics
7 December 1946	Alfred G PUGSLEY Modern Trends in Structural Science
8 February 1947	Stanley ROBSON About and Concerning Sulphuric Acid
8 March 1947	J M YOFFEY The Physical Basis of Personality

### **51<sup>st</sup> Session 1947-1948**

15 November 1947	Arthur M TYNDALL Nuclear Physics in Pictures
6 December 1947	F S WALLIS Museums and Science
7 February 1948	J KITCHING The Lough Ine Rapids
20 March 1948	G H RAWCLIFFE Mercury Arc Rectifiers

### **52<sup>nd</sup> Session 1948-49**

6 November 1948	H HELLER Nutrition and Malnutrition
4 December 1948	R C CLARKE The Changing Face of Medicine
5 February 1949	E W YEMM Nitrogen Isotopes in Plant Physiology
5 March 1949	A R COLLAR Aeronautics - Larger and Faster

## BRISTOL SCIENTIFIC CLUB

### **53<sup>rd</sup> Session 1949-1950**

5 November 1949	J L M MORRISON Gas Turbines
3 December 1949	H D CROFTON Parasites and Pastures
4 February 1950	J S BAXTER Early Human Development
4 March 1950	Wilson BAKER Penicillin: The Early Story

### **54<sup>th</sup> Session 1950-1951**

4 November 1950	J W MITCHELL The Formation of the Latent Image in the Photographic Process
2 December 1950	F Coles PHILLIPS Patterns of Movement in Rocks
3 February 1951	R W MARSH New Developments in Fungicides
3 March 1951	C A ASHFORD Respiratory Pigments

### **55<sup>th</sup> Session 1951-1952**

3 November 1951	C F POWELL New Forms of Matter
1 December 1951	F BLAKEMORE Viruses and Diseases
2 February 1952	R MILNES-WALKER Our Hearts
1 March 1952	L HOWARTH Shock Waves

## BRISTOL SCIENTIFIC CLUB

### **56<sup>th</sup> Session 1952-53**

1 November 1952	Speaker not known
6 December 1952	A E RUSSELL
7 February 1953	F C FRANK
7 March 1953	A I DARLING

(Programme Card Missing. Above details from A J B Cruickshank's notes)

### **57<sup>th</sup> Session 1953-1954**

7 November 1953	C W OTTAWAY Aspects of Animal Locomotion
5 December 1953	Scott SIMPSON Sea-Bed Studies
6 February 1954	E J FIELD Hydrophobia
6 March 1954	D D ELEY Cholinesterase

### **58<sup>th</sup> Session 1954-1955**

6 November 1954	A Victor NEALE Normal and Abnormal Growth in Children
4 December 1954	W F WHITTARD Some Modern Studies in Geology
5 February 1955	J T MARTIN Merits and Demerits of the New Insecticides
5 March 1955	H F FREUNDLICH Cancer and High Energy Radiation

## BRISTOL SCIENTIFIC CLUB

### **59<sup>th</sup> Session 1955-1956**

- |                 |   |
|-----------------|---|
| 5 November 1955 | J F NYE<br>Recent Work on Glaciers                        |
| 3 December 1955 | A M G CAMPBELL<br>Field Work in Medicine                  |
| 4 February 1956 | G C DREW<br>The Effect of Small Doses of Alcohol on Skill |
| 3 March 1956    | F J WALKER<br>Contour Mapping from Aerial Photographs     |

### **60<sup>th</sup> Session 1956-1957**

- |                 |   |
|-----------------|---|
| 3 November 1956 | M H L PRYCE<br>Nuclear Power  |
| 1 December 1956 | Robert J G SAVAGE<br>Palaeoethology: a functional approach to<br>the study of fossils                   |
| 2 February 1957 | Douglas H EVERETT<br>Hysteresis: a physical interpretation and some<br>possible biological implications |
| 2 March 1957    | Alfred POLLARD<br>Cider Making as a subject for research  |

### **61<sup>st</sup> Session 1957-1958**

- |                 |   |
|-----------------|---|
| 2 November 1957 | D P DONOVAN<br>Ammonites                                    |
| 7 December 1957 | F J TRITTON<br>Colour - Photography                         |
| 1 February 1958 | K E COOPER<br>Antibiotics and the Growth of Bacterial Cells |
| 1 March 1958    | J W E SNAWDON<br>Oral Surgery                               |

## BRISTOL SCIENTIFIC CLUB

### **62<sup>nd</sup> Session 1958-1959**

1 November 1958	F G HANNELL Climatic Fluctuations in Bristol
6 December 1958	Aitken COUPER Structure and Function in Biological Macro-Molecules
7 February 1959	J BLACK Rockets
7 March 1959	H P WHITING Lampreys

### **63<sup>rd</sup> Session 1959-1960**

7 November 1959	David WOODCOCK New Organic Fungicides
5 December 1959	Norman THOMPSON Metal Fatigue
6 February 1960	H R CAYTON Immunity
5 March 1960	R F E W PEEL The Sahara

### **64<sup>th</sup> Session 1960-1961**

5 November 1960	H A HEILBRONN Research in Pure Mathematics
3 December 1960	G CUNLIFFE The Division of Cells
4 February 1961	William J DUNNING Mass Spectrometry
4 March 1961	W D OLLIS An Excursion into Biochemistry

## BRISTOL SCIENTIFIC CLUB

### **65<sup>th</sup> Session 1961-1962**

4 November 1961	Ian H FORD Submarine Geology
2 December 1961	S G HOOKER Jet Engines
3 February 1962	S KORNER Some Relations between Philosophy and Science
3 March 1962	H E HINTON Suspended Animation

### **66<sup>th</sup> Session 1962-1963**

3 November 1962	Leslie HOUGH Biosynthesis of Carbohydrates
1 December 1962	David F GIBBS Physics of Musical Instruments
2 February 1963	R BASSINDALE Water Pollution
2 March 1963	W A GILLESPIE Antibiotics

### **67<sup>th</sup> Session 1963-1964**

2 November 1963	Peter H FOWLER Cosmic Rays and Space Flight
7 December 1963	H E HINTON Suspended Animation (A repeat of 03/03/1962?)
1 February 1964	K R L HALL Wild Monkeys
7 March 1964	R HAFNER Vertical Take-off Aircraft



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### **68<sup>th</sup> Session 1964-1965**

7 November 1964	Robert G CHAMBERS Electrons in Metals
5 December 1964	E W BRADFORD Fluoridation of Public Water Supplies
6 February 1965	H G H KEARNS Spray Techniques on Tropical Crops
6 March 1965	Frank S STONE Catalysis

### **69<sup>th</sup> Session 1965-1966**

6 November 1965	F E ROUND Biological Rhythms
11 December 1965	R R JAMISON High Speed Propulsion
5 February 1966	J C SHEPERDSON How many Numbers are there?
5 March 1966	R C WOFINDEN Aspects of Public Health in Other Countries

### **70<sup>th</sup> Session 1966-1967**

5 November 1966	J W COWIE Primordial Life
3 December 1966	P C CALDWELL The Sodium Pump
4 February 1967	J H MIDDLEMISS The Advancing Fringe of Medical Diagnostic Radiology
4 March 1967	Peter WOODWARD Molecular Architecture

## BRISTOL SCIENTIFIC CLUB

### **71<sup>st</sup> Session 1967-1968**

4 November 1967	C P HAIGH Nuclear Power - The Next Ten Years
2 December 1967	P J RANDLE Cell Control Mechanisms
3 February 1968	John M ZIMAN The Sociology of Science
2 March 1968	A B RAPER The Haemoglobin Story

### **72<sup>nd</sup> Session 1968-1969**

2 November 1968	Beryl CORNER Born Too Small
7 December 1968	Postponed until 15 February 1969
1 February 1969	Reg BRADSHAW Noah's Flood
15 February 1969	Norman H HOLLINGSWORTH Letters Patent for Inventors' Secrets
1 March 1969	Roger PARSONS Fuel Cells

### **73<sup>rd</sup> Session 1969-1970**

1 November 1969	L BROADBENT Control of Plant Virus Diseases
6 December 1969	E K TRATMAN The Caves of North West Clare
24 January 1970	Additional Special Meeting Geoffrey EGLINTON The Chemical Composition of Lunar Rocks
7 February 1970	H GIDDINGS 25 Years of Aircraft Structural Engineering
7 March 1970	Derek Russell DAVIES Passing Signals at Danger

## BRISTOL SCIENTIFIC CLUB

### **74<sup>th</sup> Session 1970-1971**

7 November 1970	Postponed to 20 March 1971
5 December 1970	Anna MAYR-HARTING Social Problems in the Bacterial World
6 February 1971	Ronald H OTTEWILL Colloids - Black Magic or Science?
6 March 1971	D HAMILTON Geological Evolution of the English Channel
20 March 1971	M J CAHALAN Science in the Mineral Industry

### **75<sup>th</sup> Session 1971-72**

6 November 1971	Penelope M JENKIN Flamingoes
4 December 1971	D F G POOLE The Skin of our Teeth (A Biological Rock)
5 February 1972	A R LANG Looking at Diamonds
4 March 1972	R T SEVERN Dam Structures

### **76<sup>th</sup> Session 1972-1973**

4 November 1972	A J Bruce CRUICKSHANK Adenosine Triphosphate: Energy and Function
9 December 1972	Anthony K BARBOUR Environmental Aspects of Non-ferrous Metal Production
3 February 1973	Tom F HEWER The Origin of Tulips
3 March 1973	L F CURTIS Mapping Soil Conditions from the Air

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### **77<sup>th</sup> Session 1973-1974**

3 November 1973	J P HUDSON Scientific Agriculture: Con Trick or Saviour of Mankind?
1 December 1973	R W BOLLAND Higher Education - for what?
2 February 1974	Mark C WHITING A Chemist looks at Oriental Rugs
2 March 1974	M A EPSTEIN Viruses and Human Cancer

### **78<sup>th</sup> Session 1974-1975**

2 November 1974	C ANDREW Machining with Abrasives
7 December 1974	J P MITCHELL Endoscopic Surgery
1 February 1975	Kathleen W DUNNING Colour and Chemical Reactivity
1 March 1975	Alex W MERRISON Nuclear Power and Predicting the Future

### **79<sup>th</sup> Session 1975-1976**

1 November 1975	T V LAWSON Wind and Buildings
6 December 1975	W PLANT Should Britain Feed Herself?
7 February 1976	A F ROGERS Prostaglandins
20 March 1976	Richard L GREGORY Modifying Speech for the Deaf

BRISTOL SCIENTIFIC CLUB

**80<sup>th</sup> Session 1976-1977**

- |                 |   |
|-----------------|---|
| 6 November 1976 | G F C ROGERS<br>The Social Consequences of an<br>Energy-Limited Economy |
| 4 December 1976 | David N DINELEY<br>A Day in the Devonian Period                         |
| 5 February 1977 | C C MORGANS<br>Forty Years of Obstetrics in General Practice            |
| 5 March 1977    | Herbert (Bertie) F KAY<br>Sailing - Now and Then                        |

**81<sup>st</sup> Session 1977-1978**

- |                 |  |
|-----------------|--|
| 5 November 1977 | Thomas K EWER<br>Animal Welfare: The Public Conscience             |
| 3 December 1977 | Colin T CHUDLEY<br>Computing & Nuclear Reactors: Their Interaction |
| 4 February 1978 | J M HAYNES<br>Chaos & Cosmos: Delights of a Natural Order          |
| 4 March 1978    | A G WALKER<br>The Changing Cereal Crop                             |

**82<sup>nd</sup> Session 1978-1979**

- |                 |   |
|-----------------|---|
| 4 November 1978 | K F SANDER<br>Noise and Signals                           |
| 2 December 1978 | Ian B HOPLEY<br>Traditional to Modern in Science Teaching |
| 3 February 1979 | G M HUGHES<br>Coelacanths and the Comores                 |
| 3 March 1979    | D C E SPELLER<br>Opportunistic Pathogens                  |

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### **83<sup>rd</sup> Session 1979-1980**

- |                 |  |
|-----------------|--|
| 3 November 1979 | J E ENDERBY<br>International Neutrons                    |
| 1 December 1979 | Alexander W MACARA<br>What price Science in Health Care? |
| 2 February 1980 | Richard D RUSSELL<br>Agriculture and the Environment     |
| 1 March 1980    | Norman H PEARCE<br>A Grasp at the Nettle                 |

### **84<sup>th</sup> Session 1980-1981**

- |                 |   |
|-----------------|---|
| 1 November 1980 | P L HANCOCK<br>Earthquakes during the last five million years |
| 6 December 1980 | Jake MACMILLAN<br>The Chemist and the Beanstalk               |
| 7 February 1981 | P H YOUNG<br>Aero Engine Prospects                            |
| 7 March 1981    | Kenneth H G ASHBEE<br>Weathering of Polymer-Based Materials   |

### **85<sup>th</sup> Session 1981-1982**

- |                 |  |
|-----------------|--|
| 7 November 1981 | J G CARR<br>Hot Chocolate  |
| 5 December 1981 | Robert H J SELLIN<br>Enhanced Oil Recovery - Seeking the Unobtainable? |
| 6 February 1981 | H (Freddie) GUTFREUND<br>Molecules and Sight                           |
| 6 March 1981    | Laurie BURBRIDGE<br>Another Computer?                                  |

## BRISTOL SCIENTIFIC CLUB

### **86<sup>th</sup> Session 1982-1983**

- |                 |  |
|-----------------|--|
| 6 November 1982 | T Hugh K BARRON<br>Thermal Expansion and Contraction of Solids                                 |
| 4 December 1982 | Edward J THOMAS<br>Education Continues - OK?   |
| 5 February 1983 | Barbara M Q WEAVER<br>Comparative Anaesthesia - are the patients<br>as different as they seem? |
| 5 March 1983    | J W ROSS<br>Virus B - A Human Experiment   |

### **87<sup>th</sup> Session 1983-1984**

- |                  |  |
|------------------|--|
| 29 October 1983  | B P J WILLIAMS<br>Rocks, Rivers and Oil                      |
| 10 December 1983 | D R BROOKS<br>Building - A Slow Process                      |
| 4 February 1984  | John S LITTLER<br>Telephones - Present and Future            |
| 3 March 1984     | Brian K FOLLETT<br>Seasonal Breeding: Nature's Contraceptive |

### **88<sup>th</sup> Session 1984-1985**

- |                 |   |
|-----------------|---|
| 3 November 1984 | Christopher E PARSONS<br>Natural History Broadcasting - Techniques for the future |
| 1 December 1984 | J G MATTOCKS<br>Grass, Geese and Guts   |
| 2 February 1985 | Colin L HONEYBOURNE<br>Organic Semiconductors: Fact, Fantasy and Future           |
| 9 March 1985    | Brian T PICKERING<br>Neuropeptides: Models or Muddles?                            |

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### **89<sup>th</sup> Session 1985-1986**

2 November 1985	Peter N T WELLS Medical Imaging
7 December 1985	Robert D ADAMS The Cello: Musical Instrument or Vibrating Structure?
1 February 1986	A B HAWKINS Slippery Slopes
1 March 1986	Alan H ADAMSON Cordon Bleu in the Cowshed

### **90<sup>th</sup> Session 1986-1987**

1 November 1986	Stephen B LUBETKIN Buildings, Blue Glass and BBC Micros
6 December 1986	R PHILLIPP Risk Assessment for some Environmental Health Problems
31 January 1987	Alan R GRANT Stretching the Limits in Scientific Computing
28 February 1987	G W NEILSON Of Neutrons, Isotopes, Ions and Water

### **91<sup>st</sup> Session 1987-1988**

31 October 1987	Exploring the Exploratory A tour guided by Richard L GREGORY
21 November 1987	Professor C Bruce PERRY, Sir Alfred PUGSLEY FRS and Sir Charles FRANK FRS. An evening of reminiscence 'One Hundred Years of the Bristol Scientific Club'
5 December 1987	K G TREHARNE New Needs and Opportunities for the future of Agriculture in the United Kingdom
30 January 1988	G M YOUNG C.A.D.....Computer Aided Disaster?
27 February 1988	Jonathan H MUSGRAVE 'Whose bones these are I think I know'



## BRISTOL SCIENTIFIC CLUB

### **92<sup>nd</sup> Session 1988-1989**

- |                 |  |
|-----------------|--|
| 5 November 1988 | Alan WORLEY<br>Celestial Fireworks: the 1987 Supernova       |
| 3 December 1988 | K HOOPER<br>The Most Dedicated Dentist                       |
| 4 February 1989 | A R JACK<br>Electricity Generation: the Appliance of Science |
| 4 March 1989    | Hilary MUIRHEAD<br>From Synchrotron to Molecular Graphics    |

### **93<sup>rd</sup> Session 1989 1990**

- |                 |   |
|-----------------|---|
| 28 October 1989 | O T G JONES<br>Oxygen Radicals: Contributors to Health and Infirmary      |
| 2 December 1989 | Peter A E STEWART<br>Penetrating Radiations make Transparent Engines      |
| 3 February 1990 | Albert PEARSON<br>Balancing Science: A View from the Chalkface            |
| 3 March 1990    | Raymond A HOLLAND<br>More than an Interest in Science - the Worsley Story |

### **94<sup>th</sup> Session 1990-1991**

- |                 |  |
|-----------------|--|
| 3 November 1990 | Roger W ALDER<br>Chemical Bonding -New insights from Caged Molecules |
| 1 December 1990 | Hylton DAWSON<br>Roars and Rumbles - Noises I have encountered       |
| 2 February 1991 | (T V LEE)<br>(Rationally Redesigned Enzymes)                         |

Note. This talk was not presented due to the untimely death of T V LEE, a member of the School of Chemistry Staff. At short notice John HOLBROOK, Professor of Biochemistry, was the speaker. He matched the original subject by presenting Enzyme Engineering. To maintain the tradition that all speakers are Club members, he was elected at that meeting. However, he did not maintain his membership of the Club.

- |              |   |
|--------------|---|
| 2 March 1991 | David E G BRIGGS<br>Exceptionally Preserved Fossils |
|--------------|---|

## BRISTOL SCIENTIFIC CLUB

### **95<sup>th</sup> Session 1991-1992**

2 November 1991	David FIELD Masers in Space
7 December 1991	M VALENTINE The Stock Exchange - Casino or Study Centre?
1 February 1992	G B R FIELDEN The Contribution of Power Jets Ltd to Jet Propulsion
7 March 1992	A W PREECE Microwaves for Imaging and Treatment

### **96<sup>th</sup> Session 1992-1993**

7 November 1992	Derek A DOMINEY The Prospects for Nuclear Power
5 December 1992	R S J SPARKS Understanding Volcanic Eruptions
6 February 1993	J M V RAYNER Dynamics of Bird Flight
6 March 1993	J R FARNDON Familial Cancers

### **97<sup>th</sup> Session 1993-1994**

6 November 1993	G D HENLEY Research in General Practice 1971 to 1991 and Thereafter
4 December 1993	R BENJAMIN Three Dimensional Radiography
5 February 1994	Colin L HONEYBOURNE Smart Sensors - Food, Personal and Industrial Hygiene
5 March 1994	Martin MOTT Cancer in Childhood - Facts and Fantasies

## BRISTOL SCIENTIFIC CLUB

### **98<sup>th</sup> Session 1994-1995**

- |                 |  |
|-----------------|--|
| 5 November 1994 | John W STEEDS<br>Interface Analysis  |
| 3 December 1994 | F P WINTERINGHAM<br>Peaceful Planetary Management -<br>an Urgently Needed New Goal for Science |
| 4 February 1995 | Peter COX<br>Wheatstone, Inventor Extraordinary, and<br>the English Concertina                 |
| 4 March 1995    | R J M CORRALL<br>Adventures with Hypoglycaemia   |

### **99<sup>th</sup> Session 1995-1996**

- |                 |  |
|-----------------|--|
| 4 November 1995 | Michael J BENTON<br>Extinctions: the past is the key to the present      |
| 2 December 1995 | John WRAGG<br>Even less an Engineer                                      |
| 3 February 1996 | Juliet ROGERS<br>Palaepathology: Disease in an Archaeological Population |
| 2 March 1996    | Ian BARRON<br>Virtual Reality  |

### **100<sup>th</sup> Session 1996-1997**

- |                 |  |
|-----------------|--|
| 2 November 1996 | P J HALL<br>A tale of Mice, Men and F.I.S.H.                                 |
| 7 December 1996 | C J BUDD<br>Applications of the Theory of Chaos to<br>Industrial Problems    |
| 1 February 1997 | John R CLAMP<br>The Discovery and Background to a Disease                    |
| 1 March 1997    | Brian VINCENT<br>Jelly and Cream or<br>Some Aspects of Modern Gel Technology |

## BRISTOL SCIENTIFIC CLUB

### **101<sup>st</sup> Session 1997-1998**

1 November 1997	M SPRINGFORD The Electron, a Centenary Lecture
6 December 1997	Lionel HAWORTH The Tyne Aero Engine
7 February 1998	J E HARRIS Destructive Rust, Creative Rust
7 March 1998	T L CHAMBERS Paediatric Nephrology - from the General to the Particular

### **102<sup>nd</sup> Session 1998-1999 (actual order, not as card)**

7 November 1998	Priscilla HEARD Hands-on Learning with a little help from the Ears
5 December 1998	Terence COSGROVE Polymers at Interfaces: Chains and Bondage
6 February 1999	Richard N DIXON Lasers: A Solution looking for a Problem
6 March 1999	Nick WRAY The Botanic Garden

### **103<sup>rd</sup> Session 1999-2000**

6 November 1999	Martin CROSSLEY EVANS From the Darkness into the Shadows: The Life of Sir Thomas Witherley (1618-1694)
4 December 1999	John CLAISSE I.P. - Intellectual or Industrial Property?
5 February 2000	Brian W LOWRIE Supersonic Transport Propulsion
4 March 2000	Gillian THOMAS @ Bristol: Presenting Science to the Public

## BRISTOL SCIENTIFIC CLUB

### **104<sup>th</sup> Session 2000-2001**

- |                 |  |
|-----------------|--|
| 4 November 2000 | Matt NICHOLS<br>The Essence of Change .....  |
| 2 December 2000 | Alan WINFIELD<br>Industrial Robotics: Artificial Animals                                 |
| 3 February 2001 | Christopher HUNTER<br>Tree Biotechnology   |
| 3 March 2001    | Ian DONALDSON<br>Minerals, Chemicals and Local Industries or<br>Vinegar and Smokescreens |

### **105<sup>th</sup> Session 2001-2002**

- |                 |   |
|-----------------|---|
| 3 November 2001 | Douglas EVERETT<br>Science, Subversion and Sabotage   |
| 1 December 2001 | John BERINGER<br>Genetics. Some Public Issues   |
| 2 February 2002 | Wendy PURCELL<br>Mini-organs in Cultures, use of Spheroids<br>in Preclinical Research & Development |
| 3 March 2002    | Anthony BARBOUR<br>Chemistry: Friend or Foe?  |

### **106<sup>th</sup> Session 2002-2003**

- |                 |  |
|-----------------|--|
| 2 November 2002 | Mike HART<br>Bright X-rays for the 21 <sup>st</sup> Century                          |
| 7 December 2002 | Christopher J WORMALD<br>The Thermodynamics Road Show                                |
| 1 February 2003 | Ralph M DENNING<br>Operation Surgeon: a watershed for aerospace                      |
| 1 March 2003    | David C WRAITH<br>Autoimmune Disease and the art<br>of self, non self discrimination |

## BRISTOL SCIENTIFIC CLUB

### **107<sup>th</sup> Session 2003-2004**

- |                 |  |
|-----------------|--|
| 1 November 2003 | John DUFFIELD<br>Removal of toxic metals from contaminated individuals                   |
| 6 December 2003 | Ron McEWEN<br>Bankrupt superpower: secrets for sale                                      |
| 7 February 2004 | Raymond A HOLLAND<br>The History of the Club<br><br>(Stuart SIDDELL topic was postponed) |
| 6 March 2004    | David STOTEN<br>The uses of adaptive controls in engineering systems                     |

### **108<sup>th</sup> Session 2004-2005**

- |                 |   |
|-----------------|---|
| 6 November 2004 | Stuart SIDDELL<br>SARS:, a lesson to be learned   |
| 4 December 2004 | Richard BURGUETE<br>Beyond the Fringe: stress analysis by the application of novel optical methods. |
| 5 February 2005 | Peter SOOTILL<br>Diagnosing and treating diseases before birth                                      |
| 5 March 2005    | Eric ALBONE<br>School-Scientist partnerships, Progress and Potential                                |

### **109<sup>th</sup> Session 2005-2006**

- |                 |   |
|-----------------|---|
| 5 Nov 2005      | Ben BRADLEY<br>The Yin and Yang of Blood Transfusion                                |
| 3 December 2005 | Roger FENELEY<br>A social taboo - a medical priority? (catheters)                   |
| 4 February 2005 | R McCLATCHEY<br>Large Scale distributed Computing, and its spin off for Industry"   |
| 4 March 2005    | Tom SIMPSON<br>New natural products from OLD pathways - teaching nature new tricks. |

## BRISTOL SCIENTIFIC CLUB

### **110<sup>th</sup> Session 2006-2007**

- |                  |  |
|------------------|--|
| 7 October 2006   | Chris STOKES<br>Food Allergy or Infectious Disease? – More than simply a question of taste |
| 18 November 2006 | Dinner but talk not possible because of power failure.<br>Postponed to next meeting        |
| 3 February 2007  | Ralph M DENNING<br>Some Questions on Global Warming, a Non-expert Inquiry                  |
| 3 March 2007     | Richard EVERSLED<br>Molecules that time forgot: deciphering the degradable                 |

### **111<sup>th</sup> Session 2007-2008**

- |                 |  |
|-----------------|--|
| 26 October 2007 | Vincent J SMITH (at Trinity College)<br>Hunting for the Higgs Boson at the Large Hadron Collider |
| 7 December 2007 | Nick AVENT (at Trinity College )<br>Towards large scale DNA-based diagnosis in medicine          |
| 2 February 2008 | John PHILLIPS ( at Oatley House)<br>Why is wave power so difficult?                              |
| 1 March 2008    | Peter MARSHALL (at Oatley House)<br>Power Generation in the 21st Century                         |

### **112<sup>th</sup> Session 2008-2009**

- |                  |  |
|------------------|--|
| 31 October 2008  | David BIRDSALL<br>Aerofoil Spoilers  |
| 6 December 2008  | Trevor GREEN:<br>The Evolution of Science, Technology and Education in the last 50 years.              |
| 23 January 2009  | Alan JOCELYN<br>Laser Induced Superplasticity or Are you ready for a stronger, lighter, shinier world? |
| 21 February 2009 | Richard SLEEMAN<br>“Forensic Mass Spectrometry   |

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**113<sup>th</sup> Session 2009-2010**

24 October 2009	Gordon BANNISTER The design and future of Hip Replacement
28 November 2009	David BIRDSALL Winglets
12 February 2010	Terry KNIBB Invention to Innovation
12 March 2010	Paul WIESE Mechatronics – the step change in Engineering