

# History of Meteorology and Physical Oceanography Special Interest Group



## Newsletter 1, 2007

### MY LAST “CHAIRMAN’S CHATTER”

“L’Atmosphère fait vivre la Terre. Océans, mers, fleuves, ruisseaux, paysages, forêts, animaux, hommes, tout vit dans l’atmosphère et par elle” — part of the 1871 opening of Camille Flammarion’s classic work *L’Atmosphère — Météorology Populaire*, one of the best early works trying to explain meteorology to a general audience. Flammarion (another intrepid balloonist) was a close friend of James Glaisher and they collaborated on several important books, including *The Atmosphere* which was translated by C. B. Pitman and then edited by Glaisher for English speakers.

Often key books in the history of meteorology have come out of direct collaborations or later updates by several authors. Let’s take a few more examples:

The seminal work *An Essay on Dew* by William Wells was written in 1814 and by the middle of the century, although it was still relevant, even the last 1821 edition had become extremely scarce. A new collaborative effort by two famous names (L. P. Casella and R. Strachan) resulted in an important new enlarged version being published in 1866.

The valuable set of meteorological and phenological observations at Cobham from 1825 to 1850 by Caroline Molesworth would not have seen widespread distribution if our first Lady Fellow, Eleanor Ormerod, had not taken up the challenge to add an introduction and tables etc. and get it published in 1880.

Just two other examples, these from the 20<sup>th</sup> century: In 1921 M. de Carle S. Salter produced his book *The Rainfall of the British Isles*. Hugh Robert Mill had hoped to produce a follow-up book on the statistics but was unable to do so owing to ill health. However, in 1928 a new collaboration between C. E. P. Brooks (Hon. Sec. of our Society) and J. Glasspoole, filled the gap with the book *British Floods and Droughts*.

The widely used meteorology text book *Weather* by Hon. Ralph Abercromby went through seven editions from its first publication in 1887. It was not until 1934 that an entirely “revised and largely rewritten” version was produced by A. H. R. Goldie (a final collaboration some 37 years after the death of one of the authors!).

As I now hand over the Chairmanship back to the safe pair of hands of Malcolm Walker, I trust that the current good collaborative participation of members — at meetings, in the newsletter and in other supporting ways — will continue to grow.

With thanks to the committee and others who have supported me during my period of office, and looking forward to continuing participation at interesting meetings!

Howard Oliver, April 2007

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### REPORTS OF MEETINGS

#### Spring Meeting 2007

#### Meteorology and World War 1- Part 2

Harris Manchester College, Oxford, 24 March 2007.

John Dalton (1766-1844), famous for his work on the physics and chemistry of gaseous vapours, was also a dedicated ‘weather watcher’, credited with over 200,000 detailed observations. He was at The New College, Manchester during the 1790s and so it was fitting that the History Group should again assemble at Harris Manchester College, Oxford, the modern day successor to Dalton’s college, for the 2007 AGM followed by the second session (the first was in November 2005) discussing the impact of meteorological matters on WW1 and vice versa.

Following the morning AGM and a lunch break, the 14 attending members had the privilege of visiting the College’s fascinating Victorian library (picture Hogwart’s library but without the Harry Potter wizardry!) where, courtesy of Sue Killoran, Librarian, we were granted a rare ‘hands on’ (literally) examination of the terrestrial and celestial globes thought to have been used by Joseph Priestley, another famous 18<sup>th</sup> chemist linked with Manchester College. Sue also showed us several rare WW1 poetry books containing evocative material to set the scene for the afternoon’s presentations.

Opening the afternoon session, Joan Kenworthy remarked that she was thrilled to be involved in another meeting on this topic because, as a result of the previous meeting, she had discovered a relative who had been involved in WW1 and about whom she had had little previous knowledge.

The first speaker was Howard Oliver who reviewed the earlier WW1 meeting (see Newsletter No 1, 2006). Arising from those earlier discussions on meteorological research to improve the accuracy of long range land-based artillery, he had tried to see what the similar experiences were for the naval gunnery. It seemed that meteorology played little or no part because of the lack of temperature and upper wind data at sea. Accuracy was achieved by firing shells to establish the initial range and correcting by visual observation. Howard also mentioned his recent paper for the Met Office on possible links between the influenza pandemic of 1918/19 (and earlier episodes) and meteorological factors (this work arose indirectly from the first session on WWI). Howard went on to outline the meteorological work being conducted around the time of WWI by Vilhelm & Jacob Bjerknes and their assistants Solberg & Petzold (he was killed at Verdun) concerning rational forecasting methods; by L. R. Richardson (numerical modelling); by Goldie (variability of the surface wind based on his studies concerning gas warfare); and by Douglas & Cave (photographic cloud studies which led to a legacy of work on atmospheric processes). Howard observed that research work in the USA lagged behind that in Europe until the Americans became involved in WWI in 1917. Then they sent 250 meteorological staff to Europe to provide aerographic services, their terminology for *meteorology for aviators*.

Malcolm Walker presented his talk 'All at Sea- marine meteorology in the second decade of the C20th'. This touched upon the catalytic effect of the Titanic disaster and rapid development of radio telegraphy for transmitting weather data from ships at sea. Malcolm outlined the work done by Geoffrey Taylor during his time on the research ship 'Scotia' which led to his classic paper (QJRMetS 1917) on the formation of fog at sea and on land. Taylor reinforced the work done by Ekman on the gradient wind and the surface friction layer (the Ekman Spiral). Taylor also proposed the concept of a 'mixing length'. Malcolm drew attention to Sir Napier Shaw's 'cyclone model' (1911) which, whilst based on some earlier models, helped to overthrow the misleading Abercromby model which had for many years retarded forecasting progress in the UK. Finally Malcolm outlined the chequered history of meteorological work in the Royal Navy after 1914, involving the loss of HMS Hampshire (in which Kitchener died), the Battle of Jutland and the Gallipoli landings in the Dardanelles.

Mick Wood then provided some fascinating reports and anecdotes about the long range and anomalous audibility of gunfire and explosions during WWI and on some other earlier historical occasions including reports by Pepys and Herschel. Many of these events were discussed in an initial article in QJRMetS (1915). Later Whipple investigated the science behind these events, publishing his work in QJRMetS (1935).

After a break for 'tea and cakes', Alan Heasman summarised the effects of WWI on the UK public meteorological services. Initially much observed data was lost because the telegraphic network was overwhelmed with war-related activity but by late 1914 observation streams from the Continent were mostly restored. The loss of data by radio-telegraphy from ships was permanent and a real setback to UK weather forecasting. Weather data had been quite detailed and popular in the daily newspapers prior to WWI but had to be significantly reduced because of security implications. The popular Daily Weather Report (DWR) had to be withheld from public distribution for two weeks although it was issued in 'real time' to government and military authorities. The Gale Warning service was also suspended for non-military use in 1915 and not restored until April 1919. As the war progressed, many younger Met Office staff volunteered or were called to military duty and older staff were retained. By 1917, the staffing situation resulted in the first recruitment of women graduates to the science staff of the Office.

Stan Cornford gave a short but detailed account of the crucial but little known work of the Special List and the R.E. Special Company and the associated meteorological services by Ernest Gold for British and German gas attacks. Stan recommended 'further studies' at the Royal Engineers Museum, Gillingham and recommended Foulkes's book 'Gas'.

A guest speaker, Anthony Rowsell, a retired plastic surgeon, gave a riveting and sombre outline of the casualties and medical challenges during WWI.

On a lighter note, Richard Gregory presented some anecdotes and incidents involving flying and weather arising from his career as a pilot (not in WWII!) especially in the early days of jet flight in the RAF.

The meeting provided many intriguing insights into the history of meteorology and the meteorology of history, both associated with WWI. Our grateful thanks go to our retiring Chairman, Howard Oliver, for making all the arrangements and our appreciation goes to the College authorities for allowing us to use their fascinating building.

Alan Heasman

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## ICHM News

The International Commission for the History of Meteorology ([www.meteohistory.org](http://www.meteohistory.org)) is organizing a conference in Rio de Janeiro in May 2008 jointly with the Museum for the History of Astronomy ([www.mast.br](http://www.mast.br)) and the Brazilian Ministry of Science and Technology. More information is given on the website for the conference <http://www.weatherlife.org>.

Connie Ludeker

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## Minutes of the AGM of the Special Interest Group for the History of Meteorology and Physical Oceanography

Harris Manchester College, Oxford  
Saturday, 24 March 2006 at 11:35

### Members present

Oliver Ashford	Sara Osman
Stan Cornford	Vernon Radcliffe
Richard Gregory	P R Rogers
Alan Heasman	Malcolm Walker
Joan Kenworthy	Alan Wall
Howard Oliver	Mick Wood

### Apologies for absence were received from:

Rodney Blackall	Ann Shirley
Margaret Deacon	Diane Walker
Anita McConnell	Dennis Wheeler
C R Milne	Alan Wood
David Pedgley	

### 1. Report of the last meeting – 1 April 2006

A report of the meeting was published in Newsletter 1, 2006. The report was seen and accepted.

### 2. Chairman's report

Howard Oliver summed up the highlights of his chairmanship, including more participation from members at meetings; informal sessions at the end of meetings for members to give short updates; display items available at meetings.

### 3. Treasurer's Report

Mick Wood presented the 2006 accounts, which were accepted. He thanked the Crewes for their audit work.

### 4. Neumann Prize

Congratulations to Oliver Ashford. The formal presentation will be made at the RMetSoc conference in Edinburgh in September.

### 5. Events

Since the last AGM, the meeting on Aviation meteorology in Bedford and visit to Cardington has been held (Details in Newsletter 2, 2006).

### Future meetings planned

**Friday 7 September - Joint History Group & Scottish Centre meeting.** Alexander Buchan memorial meeting (who died in 1907)

This meeting will take place during the RMetS 2007 conference at Heriot-Watt University, Edinburgh.

### Saturday 8 September

A visit to the view the Marquis of Bute's meteorological archive at Mountstuart House, Isle

of Bute. A tour of the house and gardens will also be available.

Also of interest during the RMetS 2007 conference may be the Presidential Address on Thursday afternoon (6<sup>th</sup> Sept) and the Awards dinner on Thursday evening.

### Suggestions for future meetings

- 1950s and 1960s
- Informal meetings on 1940s by those who were there
- "What we are not allowed to talk about" – eg work at Porton Down

Richard Gregory suggested the RAF club in Piccadilly as a possible London venue. He will investigate further.

### 6. Election of Committee

Continuing Committee Members are:  
Margaret Deacon (as a corresponding member)  
Alan Heasman  
Joan Kenworthy  
Howard Oliver  
Sara Osman  
Dave Pedgley  
Vernon Radcliffe  
Dennis Wheeler (as a corresponding member)  
Mick Wood  
Malcolm Walker

### 7. Election of Officers

The following were confirmed:  
Malcolm Walker (Chairman) from 1 May. Howard will continue as Chairman until end of April  
Mick Wood (Vice Chairman and Treasurer)  
Sara Osman (Secretary)

**8. AOB** – On behalf of the Group Malcolm Walker thanked Howard for his work as Chairman.

The next AGM will be held on 19 April 2008. The venue will be confirmed but is likely to be Reading.

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### Member's news

Joan Kenworthy is hoping to complete a book on the history of climate and meteorology in the Kenya Highlands, which naturally includes the history of the East African Meteorological Service. She would appreciate information about any one who worked in the E A Met Department up to independence in the early 1960s, who would be happy to be interviewed.

[Joan.Kenworthy@aol.com](mailto:Joan.Kenworthy@aol.com)

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## Forthcoming events

### Friday 7 Sept at Heriot-Watt University, Edinburgh Meeting on the life, achievement and legacy of

**Alexander Buchan (1829- 1907)**, for 47 years Secretary of the Scottish Meteorological Society and a giant of British meteorology.

Provisionally 11:00 to 16:30, with coffee from 10:30.

Speakers include:

*Marjory Roy Buchan's* life, achievements and contribution to synoptic meteorology;

*Geoff Monk* The Ben Nevis Observatory: Scotland's weather revealed;

*Richard Tabony* Buchan's contribution to climatology;

*Malcolm Walker* Buchan's contribution to international meteorology;

*David Munro* Buchan's contribution to physical geography; and

*Joachim Pelkowski* Developments in atmospheric radiation in the second half of the nineteenth century.

There will be an exhibition which will include a copy of Bartholomew's Climatological Atlas of 1899.

Overnight accommodation will be available at very competitive rates on the Heriot-Watt campus.

### Saturday 8 Sept- outing to Mount Stuart House on the Isle of Bute to view the clock-barograph made in the 18th century for the Earl of Bute by Alexander Cumming and also to view:

a manuscript relating to Sir Samuel Morland's Balance Weather Glass;

two books by Colonel James Capper (dating from 1783 and 1803) concerned with weather observations;

weekly weather reports made at Mount Stuart between 1746 and 1760; and

weather notebooks of Samuel Molyneux from the period 1708 to 1733 containing weather observations made in London.

The house at Mount Stuart is spectacular and the gardens are special. All in all, this is a special outing which should appeal not just to members of the Group but also partners.

The **Presidential Address** of the Royal Met. Society will be given at Heriot-Watt University on Thursday afternoon, 6 Sept and the Society's **Awards Dinner** will be held in Edinburgh in the evening that same Thursday. One of those receiving an award will be Oliver Ashford, winner of the 2007 Jehuda Neumann Memorial Prize.

Malcolm Walker

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## Neumann Prize

The Neumann Prize has been awarded to Oliver Ashford.

During the past sixty years, Oliver Ashford has published many articles on historical aspects of meteorology, mostly in *Weather* and the *Bulletin of the World Meteorological Organization*. He has taken a particular interest in the pioneer of numerical weather prediction L.F. Richardson, who was a family friend, and not only published articles about Richardson and the monograph *Prophet or Professor? The life and work of Lewis Fry Richardson* (Adam Hilger, 1985) but also edited *The collected papers of Lewis Fry Richardson* (Cambridge University Press, 1993). He has keenly supported the History Group of the Royal Meteorological Society since its foundation in 1983 and given insightful talks at a number of meetings organized by the Group. In 1991, he interviewed Jehuda Neumann, in whose memory the prize was instituted, this being one of the Royal Meteorological Society's tape-recorded interviews of distinguished meteorologists. In 1994, Oliver was himself interviewed. Transcripts of the tapes can be read in the National Meteorological Library, Exeter.

Malcolm Walker

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## History of Science Journals

Following a suggestion from Dr Margaret Deacon, here is a trawl of papers concerning the history of meteorology in history of science journals from 2000 (excluding book reviews). Members with internet access can continue to search for titles without visiting a library!

### **Annals of the History of Science**

<http://www.tandf.co.uk/journals/tf/00033790.html>  
[Press "online contents" at bottom of grey panel]

Wallis, R. Cross currents in Astronomy and Navigation. Thomas Hornsby F R S (1732-1810), *Annals of Science* (2000), **57**, 219-240

McConnell, A. 'Origins of the marine barometer', *Annals of Science* (2005), **62**, 83-101

Holmberg, G. 'Taming the tempests through telegraphy and media appearances: science communication and the construction of a Swedish storm-warning system before the Great War', *Annals of Science* (2007), **64**, 77-91

### **British Journal for the History of Science**

<http://journals.cambridge.org/action/displayJournal?jid=BJH>

[Use "search journal contents" for "Meteorology"]

Golinski, J. 'Exquisite Atmography: theories of the world and experiences of the weather in a diary of 1703', *BJHS* (2001), **34**, 149-171

Anderson, K. 'Looking at the sky: the visual context of Victorian meteorology', *BJHS* (2003), **36**, 301-332

Zuidervaart, H. J. 'An eighteenth-century medical-meteorological society in the Netherlands: an investigation of early organisation, instrumentation and quantification. Part 1', *BJHS* (2005), **38**, 379-410

Zuidervaart, H. J. 'An eighteenth-century medical-meteorological society in the Netherlands: an investigation of early organization, instrumentation and quantification. Part 2', *BJHS* (2006), **39**, 49-66

Naylor, S. 'Nationalizing provincial weather: meteorology in nineteenth-century Cornwall', *BJHS* (2006), **39**, 406-433

### Archives

[http://www.britishrecordsassociation.org.uk/publication\\_pages/Publications.htm](http://www.britishrecordsassociation.org.uk/publication_pages/Publications.htm)

Wheeler, D. 'Archives and climatic change: how old documents offer a key to understanding the world's weather', *Archives* (2006), **31**, 119-132

### Journal of the History of Ideas

Cameron Shelley 'The influence of folk meteorology in the Anaximander Fragment', *Journal of the History of Ideas* (2000), **61**, 1-17.

**History of Science** <http://www.shpltd.co.uk/hs.html>

[Volume numbers for contents clearly indicated at left hand side]

Jankovic, V. 'The place of nature and the nature of place: the chorographic challenge to the history of British provincial science', *History of Science* (2000), **38**, 79-113

And finally one book:

Cock, R. (2005) 'Scientific Servicemen in the Royal Navy and the Professionalisation of Science, 1816-1855.' Chapter 7 in D. M. Knight and M. D. Eddy (eds.) *Science and Beliefs. From Natural Philosophy to Natural Science, 1700-1900*. Aldershot: Ashgate, 95-111

The whole book is stimulating, but that chapter usefully summarizes material relevant to the history of meteorology and oceanography.

Joan Kenworthy

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### They don't make observers like they used to!

These are pictures of the Sulphur Mountain weather station (above Banff in the Canadian Rockies).

The old weather station on Mount Samson (in the near distance) was set up by Norman Samson in 1903, who kept observations from 1903 to 1931 when he retired. The walk from Banff to the weather station was from 1380 metres to 2450 metres which he did at least a thousand times!!

There is now a gondola up the mountain and an ATWS.



Mick Wood

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### ASLI Award - History of Meteorology Category

The Atmospheric Science Librarians International (ASLI), 2006 ASLI CHOICE was awarded to James Fleming's *The Callendar Effect, The Life and Work of Guy Stewart Callendar, the Scientist Who Established the Carbon Dioxide Theory of Climate Change* (ISBN 13: 978-1-878220-76-9)

Further details from:

<http://www.ametsoc.org/pubs/books/bookdesc.html#CLDR>

In 1938, Callendar discovered that global warming could be brought about by increases in the concentration of atmospheric carbon dioxide due to human activities, primarily through burning fossil fuels. Science historian James Fleming introduces us to one of Britain's leading engineers and explains his life and work through two World Wars to his legacy as the scientist who established *The Callendar Effect*.

## Some useful websites

On the history of the Coriolis Effect:

<http://www.meteohistory.org/2005historyofmeteorology2/01persson.pdf>

On the history of George Hadley's theory:

[http://www.meteohistory.org/2006historyofmeteorology3/2persson\\_hadley.pdf](http://www.meteohistory.org/2006historyofmeteorology3/2persson_hadley.pdf)

Early operational Numerical Weather Prediction outside the USA: an historical Introduction:

(All Meteorol. Appl. 12, 2005)

Pt I: Internationalism and engineering, NWP in Sweden 1952-69, pp 135-159

Pt II: Twenty countries around the world, pp. 269-289

Pt III: Endurance and mathematics – British NWOP 1948-65 pp. 381-413

Draft to the above:

[http://www.science.unitn.it/~meteo/2004/Persson/NWP\\_HISTORY\\_2MB.pdf](http://www.science.unitn.it/~meteo/2004/Persson/NWP_HISTORY_2MB.pdf)

On Sutcliffe and Rossby:

[http://meteo9.uibk.ac.at/Ehrendorfer/theorie\\_III/Innsbruck2004\\_RossbySutcliffe\\_1.pdf](http://meteo9.uibk.ac.at/Ehrendorfer/theorie_III/Innsbruck2004_RossbySutcliffe_1.pdf)

[http://www.science.unitn.it/~meteo/2004/Persson/Trento2004\\_Sutcliffe.ppt](http://www.science.unitn.it/~meteo/2004/Persson/Trento2004_Sutcliffe.ppt)

More on the history of NWP (ppt):

[http://www.science.unitn.it/~meteo/2004/Persson/Trento2004\\_NWP\\_his.ppt](http://www.science.unitn.it/~meteo/2004/Persson/Trento2004_NWP_his.ppt)

On the history of Rossby waves:

[http://www.science.unitn.it/~meteo/2004/Persson/Trento2004\\_RossbyWaves.ppt](http://www.science.unitn.it/~meteo/2004/Persson/Trento2004_RossbyWaves.ppt)

This is not exactly history, but on the other hand errors that have been around for a very long time.

[http://imgi.uibk.ac.at/MEhrendorfer/research/talks/otalks/Innsbruck\\_DynMet\\_Corr2007.pdf](http://imgi.uibk.ac.at/MEhrendorfer/research/talks/otalks/Innsbruck_DynMet_Corr2007.pdf)

Anders Persson

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## Member's news

John A. Kington: Publications 2006

Kington, J.A. and Selinger, F., 2006

"The development and use of weather buoys 1940-2005" *Weather* 61, 164-166.

Kington, J.A. and Selinger, F., 2006

"Lindenberg Observatory meteorological flights and early studies of upper-level winds" *Meteorologische Zeitschrift* 15, 675-679.

Kington, J.A. and Selinger, F., 2006

Wekusta: Luftwaffe Weather Reconnaissance Units & Operations 1938-1945. Flight Recorder Publications, Ottringham, U.K.

John A. Kington, Climatic Research Unit

School of Environmental Sciences

University of East Anglia, Norwich NR4 7TJ

<http://www.cru.uea.ac.uk/cru/people/kington/>

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## Members 2006

Rob Allan (Exeter)  
Alberto Ansaloni (Milano Italy)  
Oliver Ashford (Didcot)  
Rodney Blackall (Buckingham)  
Ron Bristow (Maidstone)  
Stephen Burt (Stratfield Mortimer)  
Jim Burton (Ilkley)  
J Carpine-Lancre (Beausoleil, France)  
Victoria Carroll (London)  
I E D Carter (London)  
Mike Collins (Frinton on Sea)  
Phil Collins (Okehampton)  
Andrew Cook (London)  
Stan Cornford (Bracknell)  
Maurice Crewe (Bracknell)  
B D Dagnall (Lymington)  
Peter Davies (Reading)  
J L Davis (London)  
Tony de Reuck (London)  
F de Strobel (La Spezia, Italy)  
Margaret Deacon (Callington)  
Laurie Draper (Dingwall)  
Storm Dunlop (Chichester)  
Philip Eden (Luton)  
Michael Field (Arundel)  
Tom Fitzpatrick (Glasgow)  
B D Giles (Auckland, New Zealand)  
Valerie Green (London)  
Richard Gregory (Woodbridge)  
Eric Harris (Crowthorne)

Alan Heasman (Marlborough)  
A M Hughes (Oxford)  
Julian Hunt (Cambridge)  
Jane Insley (London)  
Arnold Johnson (Maidenhead)  
Simon Keeling (Wombourne, Staffs)  
Joan Kenworthy (Satley, County Durham)  
Martin Kidds (Cullompton)  
John Kington (Norwich)  
Daudu Kuku (London)  
David Limbert (Cambridge)  
Jean Ludlam (Sunningdale)  
Norman Lynagh (Chalfont St Giles)  
Ian MacGregor (Exeter)  
Julian Mayes (West Molesey)  
Anita McConnell (Stowmarket)  
C R Milne (Farnborough)  
Alison Morrison-Low (Edinburgh)  
John Norris (Gerrards Cross)  
Howard Oliver (Chalgrove)  
Sara Osman (Exeter)  
Andrew Overton (Doncaster)  
David Pedgley (Wallingford)  
Ernie Pepperdine (Scunthorpe)  
Anders Persson (Soderkoping, Sweden)  
R W Phillips (Lincoln)  
Vernon Radcliffe (Newark)  
P R Rogers (Sevenoaks)  
Peter Rowntree (Crowthorne)

Marjory Roy (Edinburgh)  
Ann Shirley (Canterbury)  
David Simmons (Cambridge)  
Diane Walker (Tiverton)  
Malcolm Walker (Tiverton)  
Alan Wall (Southampton)  
Catharine Ward (Bury St Edmunds)  
Dennis Wheeler (Sunderland)  
G D White (Truro)  
Peter Wickham (Wokingham)  
Christopher Wilson (Cullompton)  
Mick Wood (Bracknell)

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**This is your newsletter** – please send any comments or contributions to Sara Osman, Library & Archive Manager, National Meteorological Library, FitzRoy Road, Exeter EX1 3PB. ([sara.osman@metoffice.gov.uk](mailto:sara.osman@metoffice.gov.uk))

The annual subscription for membership of the History Group is £5 (payable to Royal Meteorological Society History Group). Members will be sent a reminder when their sub is due.