

# History of Meteorology and Physical Oceanography Special Interest Group



Newsletter 2, 2007

## A VIEW FROM THE CHAIR

It has long been to me a matter of regret that the history of science is so neglected in school and university curricula. I know I am biased and I know that I am preaching to the converted, but who can disagree with the words of Forbes and Dijksterhuis (1963):

Not until people have learnt to see how our present knowledge and ability has grown up from very modest beginnings, as a result of indefatigable collaboration between many minds and ceaseless collective development of what has once been achieved, will they be able to appreciate it fully and learn to use it with respectful gratitude.

Why is the history of science so neglected? Why are so few meteorologists, oceanographers and other scientists interested in the endeavours of the pioneers and others who have brought their subjects to their present states of development? Is it the word "history" that causes so many eyes to glaze over? Does the word bring back memories of boring history lessons at school? Would "heritage" be a better word? Would our Group be better called the Royal Meteorological Society's Special Interest Group for the Heritage of (rather than History of) Meteorology and Physical Oceanography?

In my view, we become better students of our subjects (meteorology and physical oceanography) if we know and understand how these subjects have developed. And who can fail to be fascinated by the stories behind many great discoveries? I know I am being immodest by recommending this, but have a look at, for example, my two-part article on the fundamental principles that were discovered as a consequence of Nansen's daring journey across the Arctic Ocean from 1893 to 1896 (Walker, 1991). If ever there was an exciting adventure story with an important scientific outcome, that was it.

But also, there is a danger of the wheel being reinvented if we forget or overlook the endeavours of the past. Sir John Mason brought out this point clearly in his masterly talk at the Society's 150<sup>th</sup> Anniversary conference at The Royal Society in 2000, when he showed us how the claims of cloud-seeders and rain-makers in the 1950s and 1960s

had all been discredited but now some of the discredited ideas were re-emerging because previous studies of cloud-seeding and rain-making had been forgotten.

Ours is one of the Royal Meteorological Society's most active Special Interest Groups. We have more than 70 members and we arrange meetings full of interest which range widely over the history (heritage!) of meteorology and physical oceanography. But I feel we should be able to attract many more members and maybe thus help our subjects advance even more rapidly and surely than they are doing already. Will you help, please? Will you explain to your friends, acquaintances and colleagues, please, the reasons why history is important. And in so doing, I very much hope you can recruit new members for the Group.

Forbes, R.J. and Dijksterhuis, E.J. (1963) *A History of Science and Technology* (Vol.1), Pelican Books, 294pp.

Walker, J.M. (1991) Farthest North, Dead Water and the Ekman Spiral.

Part 1: An audacious venture. *Weather*, Vol.46, pp.103-107.

Part 2: Invisible waves and a new direction in current theory, *Weather*, Vol.46, pp. 158-164.

Malcolm Walker, Chairman of the History Group

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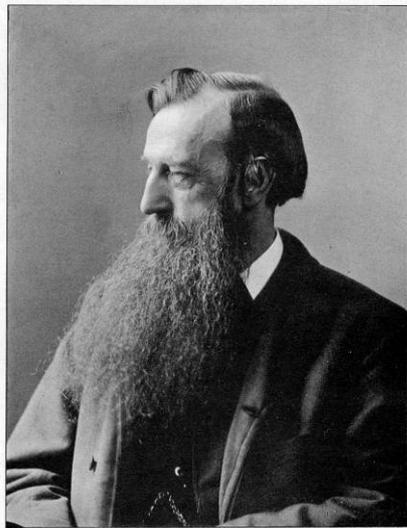
## REPORTS OF MEETINGS

### The Life, Achievement and Legacy of Alexander Buchan MA LLD FRSE FRS (1829-1907)

On 7 September, the History Group joined the Scottish Centre of the RMets for a commemorative one-day meeting at Heriot-Watt University to mark the centenary of Alexander Buchan's death. As indicated in the meeting's title, speakers addressed a wide variety of aspects of Buchan's life and times. Additionally, various materials were provided from archives in Edinburgh and Exeter for a most interesting supporting exhibition, including the items marked below as \*. An excellent illustrated 36-page booklet containing extended abstracts of the talks was provided for the 23 participants.

The presentations began with a *tour de force* from Marjory Roy, who described Buchan's life from his birth in the weaving village of Kinnesswood, Kinross-shire, to his death in Edinburgh at the age

of 78. After qualifying as a teacher, he taught for 12 years until 1860 when “a weakness of the throat” led him to look for alternative work. In December 1860, he was appointed Secretary of the Scottish Meteorological Society and continued in this role until his death.



*Alexander Buchan*

During Buchan’s initial years at the Society, he also studied at the University of Edinburgh, graduating MA in 1864. He further developed the network of climatological stations across Scotland and carried out research on the observations\*. He edited the Society’s journal (begun in 1864) and was the principal contributor. His Handy Book of Meteorology (described as “the first textbook of modern meteorology”) was published in 1867\*, followed by a new and much revised second edition in 1868\*. These included the use of surface pressure charts to track storms across the globe.

Following the establishment of the Ben Nevis Observatory in 1883, Buchan drew up the scheme of work at the Observatory, instructed the observers and wrote many papers on the data\* obtained. He also published the first monthly and annual maps of mean sea-level pressure and temperature maps for the British Isles in 1883. Following work on data from the Challenger expeditions, he updated his global mean pressure and wind maps and added mean temperature maps. These were published in the Challenger Reports (1889)\* and in the Bartholomew’s Physical Atlas (1899)\*.

Buchan’s importance in meteorology was acknowledged by his numerous awards from various countries\*. In 1887 he was appointed a member of the Meteorological Council of the Royal Society of London which directed the UK Meteorological Office. In 1902, he was the first

recipient of the Symons Memorial Gold Medal of the Royal Meteorological Society.

Following the amalgamation of the Royal Meteorological Society and the Scottish Meteorological Society in 1921, the funds of the Scottish Society were used to endow the annual Buchan Prize.

Ben Nevis Observatory data obtained during the period 1883 to 1904 was then discussed by Geoff Monk with particular reference to the usefulness of this data to current mountain users.

In his review of Buchan’s contribution to climatology, Dick Tabony showed that the hallmark of Buchan’s work was careful data analysis. He emphasised that Buchan knew his data in detail as he handled all the manual returns from the observers. Where repeated errors were noticed from a station, he would visit the location to ensure that mistakes were corrected. The importance of Buchan’s analyses, using pressure observations corrected to sea-level and temperature observations corrected for altitude, was discussed. His climatological maps, particularly those in the 1899 Bartholomew Atlas, were reviewed.

Malcolm Walker summarised Buchan’s contributions to international developments in meteorology, which included his participation in the Leipzig Conference (1872) and the Vienna Congress (1873) where he represented both the Scottish Meteorological Society and the British Government and proved a most active participant of both meetings.

The scientific developments in atmospheric radiation and thermodynamics which took place during Buchan’s lifetime were discussed by Joachim Pelkowski. He classified Alexander Buchan as belonging to the “inductive school” of meteorologists whilst the studies of atmospheric radiation and thermodynamics which he was reviewing could be classified as the “deductive school”. A survey of the work of Wilhelm von Bezold (1837-1907) was central to this presentation which looked at “two problems of nineteenth century atmospheric science: accounting for the vertical lapse rate of temperature and calculating the “solar climate” when the modifying action of the atmosphere is included”.

Buchan’s often overlooked contribution to synoptic meteorology was summarised by Marjory Roy. He produced synoptic charts using observations across Europe for sequences of days in October, November and December 1863 from which he proposed rules for the movement of storms. In his analysis\* of two storms which passed over the United States in March 1859, Buchan constructed more than 21 working charts from 53 ships’ logs as

well as from land stations. His work traced the storms from North America across the Atlantic, and in one case as far as St Petersburg. In the second edition of his Handy Book of Meteorology, Buchan showed that hurricanes and typhoons are identical weather systems. He also referred to the need for synchronous charts of weather over considerable portions of the globe.

David Munro reviewed Buchan's contributions to physical geography and demonstrated that he can be considered a founding father of academic geography. Buchan was a founder member of the Council of the Scottish Geographical Society and played an active part in its proceedings. The meteorology section of the Society's 1895 Atlas of Scotland was compiled by Buchan, and it was because of Buchan's remarkable work that the first volume to be published in the Bartholomew Physical Atlas series was Volume III on meteorology. Many scientists throughout the world consulted Buchan when planning expeditions and he particularly influenced the promotion of meteorological research in polar regions. David summarised Buchan's contributions to the development of physical geography as being the collection of data, the geographical representation of these data in a cartographic form and the analysis of data.

The day concluded with two short contributions. The first was from Peter Rowntree, who assessed Buchan's estimates of late 18<sup>th</sup> century Scottish temperatures. Finally, Marjory Roy reminded us of what exactly Buchan had written in 1868 about cold and warm periods of the year and how his so-called "Spells" are often referred to incorrectly.

Buchan's Life, Achievement and Legacy were indeed immense and were given appropriate recognition in this most absorbing meeting containing enlightening presentations from all the speakers.

Diane Walker

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## **DATES FOR YOUR DIARY**

**Saturday 19 April 2008** (10:30 to 17:00) at **Radley College (between Abingdon and Oxford)**.

A meeting on "Public Weather Services in the UK over the past half century". This meeting to include the Group's AGM. There is a railway station at Radley, on the Didcot-Oxford line.

**Saturday 28 June 2008** (10:30 to 17:00 at the **National Oceanography Centre, Southampton**).

A Royal Meteorological Society Saturday Meeting organized by the Group on "Advances in Southern Ocean meteorology and ocean science between the First and Second World Wars", with particular

reference to the *Discovery* investigations and the Second International Polar Year. This meeting to include an exhibition of *Discovery II* memorabilia and other items.

**Wednesday 19 November 2008** (13:30 or 14:00 to 17:00) at **Reading University**.

A Royal Meteorological Society Wednesday Meeting organized by the Group, the meeting to take as its starting point a "classic" of meteorology and then consider subsequent developments of the subject in question. The meeting next November to start with the work of Sir Gilbert Walker in the 1920s and 1930s and cover changing approaches to the meteorology of the tropics and subtropics over the past 70 years, plus the evolving knowledge and understanding of El Niño, the Southern Oscillation, the North Atlantic Oscillation, the Madden-Julian Oscillation and seasonal forecasting.

**Thursday 15 January 2009** (10:30 to 16:30) at the **Institute of Physics, London**.

A joint meeting with the Retired Members Group of the Institute of Physics on "The development of meteorological observations", concerned mainly with the history of weather radar, meteorological satellites and other remote-sensing techniques.

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## **THE ROYAL METEOROLOGICAL SOCIETY'S ARCHIVE**

There is in the archive of the Royal Meteorological Society a veritable treasure trove of letters, weather diaries, manuscripts, minute books, ledgers, nomination papers, old glass slides and much else, dating back to the Society's foundation in 1850 and, indeed, before then, because many letters, minutes and other records of the two London Meteorological Societies which preceded the present society are also in the archive. The earliest of all the material is the set of tabulated weather observations recorded by Surgeon Archibald Menzies during Vancouver's circumnavigation of 1791-95 (see Walker, M., 2006, "The weather observations of Surgeon Menzies", *Weather*, Vol.61, pp.315-319). There is also in the archive a chart prepared by Robert Marsham showing the earliest dates of plants, birds and other seasonal indicators as observed on the family's estate near Norwich in the period 1736 to 1798.

Most of the Society's archive is cared for by the National Meteorological Archive at Exeter. There is now very little of the archive pre-1960 at the Society's headquarters in Reading. The nomination papers are there, and copies of membership lists back to 1850, but almost everything else is now at Exeter. Copies of all the journals and most of the

books ever published by the Society can be viewed at either Exeter or Reading. The journals (all held in the National Meteorological Library) are as follows:

- Annual Reports of the British Meteorological Society (1851-1861)
- Proceedings of the British Meteorological Society (1861-1866)
- Proceedings of The Meteorological Society (1866-1871)
- Quarterly Journal of the Meteorological Society (1871-1883)
- Quarterly Journal of the Royal Meteorological Society (since 1883)
- Memoirs of the Royal Meteorological Society (1926-1939)
- Weather (since 1946)
- International Journal of Climatology (since 1981)
- Meteorological Applications (since 1994)

In addition, there are complete runs of the Journal of the Scottish Meteorological Society (1866-1921) at Exeter and Reading. The rare meteorological books which are owned by the Society have been cared for by the National Meteorological Library and Archive since the 1970s; while Luke Howard's watercolours, bequeathed to the Society by Miss Agnes Fry, a descendant of Howard, are cared for by the Science Museum.

To find Royal Meteorological Society material in the National Meteorological Archive (NMA) via the web, start from

<http://www.metoffice.gov.uk/corporate/library/catalogue.html>. If you wish to visit the NMA or if you have any queries about the Society's archive or, indeed, anything else which is held in the NMA, telephone 01392-360987 or e-mail [metarc@metoffice.gov.uk](mailto:metarc@metoffice.gov.uk).

Malcolm Walker

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### **CLASSIC METEOROLOGICAL PAPERS AND ROYAL METEOROLOGICAL SOCIETY MEMBERSHIP LISTS**

There is now a considerable amount of material in the History Section of the Royal Meteorological Society's website, including scanned copies of 27 'classic' meteorological papers and the 1864, 1867, 1869, 1873, 1876, 1879, 1880, 1882, 1888 and 1900 membership lists of the Society. To find the papers and lists, go to <http://www.rmets.org/about/history.php> and click on "Classic meteorological papers".

For the 1850 and 1851 membership lists and snippets of information about some of the people

who were members in those years, go to <http://www.rmets.org/pdf/metsocearlymembers.pdf>.

Malcolm Walker

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### **OCCASIONAL PAPERS ON METEOROLOGICAL HISTORY**

All six of the *Occasional Papers on Meteorological History* which have been produced by the History Group for the Royal Meteorological Society are now on the web. The sixth paper, "Air, Earth, and Skies ... and Man's Unconquerable Mind", by Joan Kenworthy, which has been available in paper form since early 2004, was added in the summer of 2007. The URL of the paper is: <http://www.rmets.org/pdf/hist06.pdf>

Malcolm Walker

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### **THE DISCOVERY SYMPOSIUM**

An international symposium was held at Southampton from 28 to 30 June 2004. Called "A century of *Discovery*", it celebrated the centenary of the return of the Steam Yacht *Discovery* in 1904 from a successful voyage of exploration to the edge of the Antarctic continent and on the surrounding Southern Ocean. Papers presented at the symposium have been published in a special issue of the journal of The Society for the History of Natural History, *Archives of Natural History*, Volume 32, Part 2, October 2005. They include the following:

"Antarctic meteorology and climatology: an unfolding story of discovery", by Malcolm Walker, pages 316-333, and a companion paper

"Aspects of modern Antarctic meteorology and climatology", by John Turner, pages 334-345.

"Ships employed in Arctic ice: *Discovery's* past, 1602 to 1876", by Ann Savours, pages 144-160.

"The foundations of Antarctic glaciology", by R L Cameron, pages 231-244.

"Surveying terrestrial magnetism in time and space", by Anita McConnell, pages 346-360.

"From *Discovery* to discovery: the hydrology of the Southern Ocean, 1885- 1937", by Eric Mills, pages 246-264.

"Southern Ocean circulation", by Stuart Cunningham, pages 265-280.

Malcolm Walker

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# THE GROUP'S OUTING TO MOUNT STUART HOUSE ON THE ISLE OF BUTE Saturday 8 September 2007

PICTURES OF THE CLOCK BAROGRAPH MADE BY ALEXANDER CUMMING AND MATERIAL IN THE ARCHIVE OF THE MARQUESS OF BUTE.

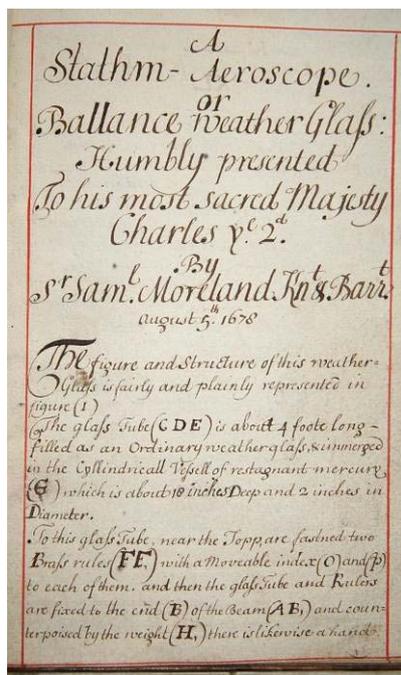
The clock barograph dates from the early 1760s and is one of only four still in existence. The picture on the right shows Bute Archivist Andrew McLean with History Group members Mick Wood and Diane Walker.

The picture below left shows the barograph chart and clock, the latter reading (correctly) 13:52 UTC. The other picture below shows the face of the barometer, reading 30.42 inches (1030 mb), which was exactly the right value for that day and time.

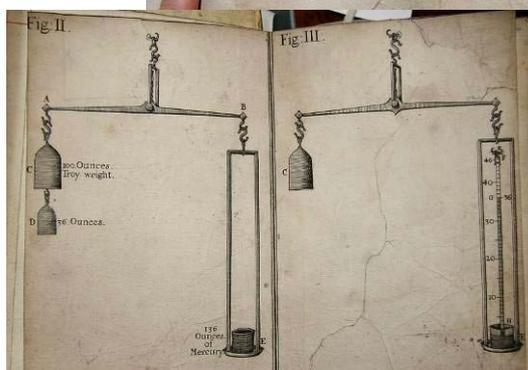
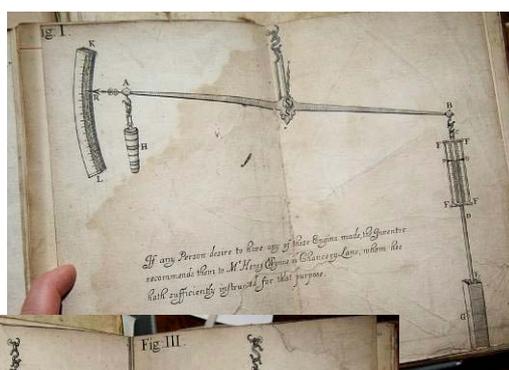


The picture below left shows the first page of a short manuscript by Sir Samuel Moreland dated 5 August 1678, concerning his

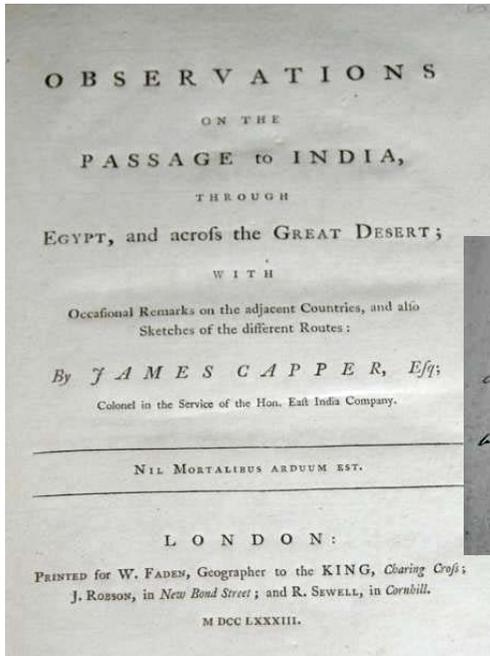
*Ballance weather Glass: humbly presented to his most sacred Majesty Charles ye 2<sup>d</sup>.*



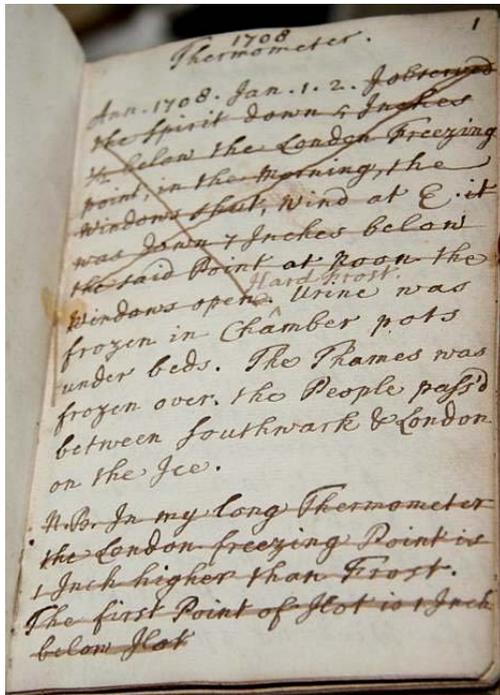
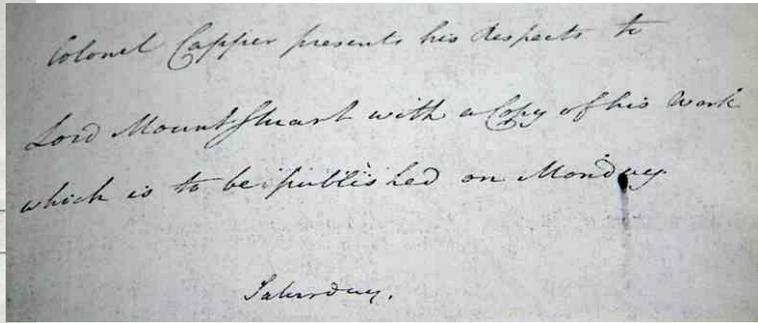
The pictures on the right show diagrams from the document.



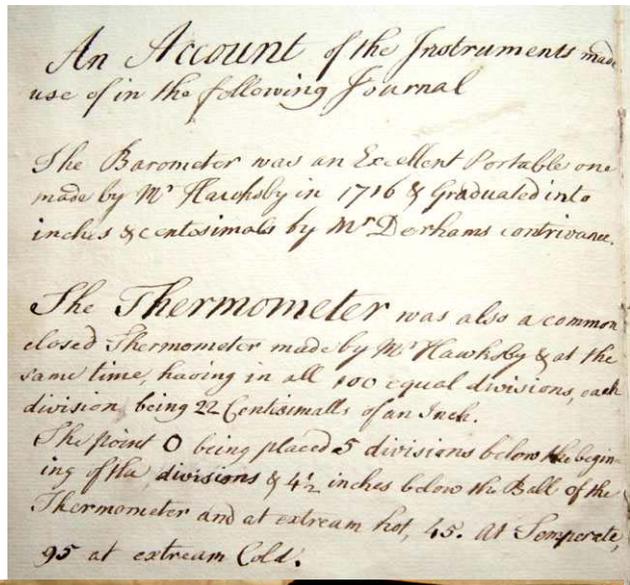
See: Bryden, D.J. (1975), Sir Samuel Morland's Account of the Balance Barometer, 1678. *Annals of Science*, Vol.32, pp.359-368.



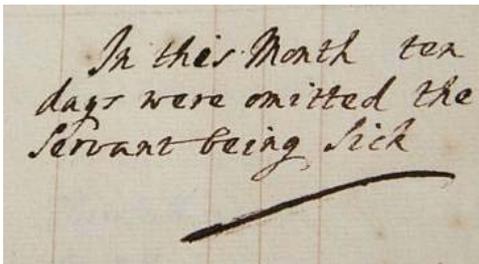
The title page of *Observations on the passage to India through Egypt and across the Great Desert*, by Colonel James Capper, 1783, and the dedication in the book to Lord Mountstuart (later 1<sup>st</sup> Marquess of Bute), which is dated "Saturday" and reads "Colonel Capper presents his respects to Lord Mountstuart with a copy of his work which is to be published on Monday".



◀ A manuscript journal containing Samuel Molyneux's weather observations made in London. On the page on the left, for 1 and 2 January 1708, it is reported that "the Thames was frozen over" and "the people passed between Southwark and London on the ice". It is also noted that "urine was frozen in chamber pots under beds"!



▼ Details from weather diaries ►

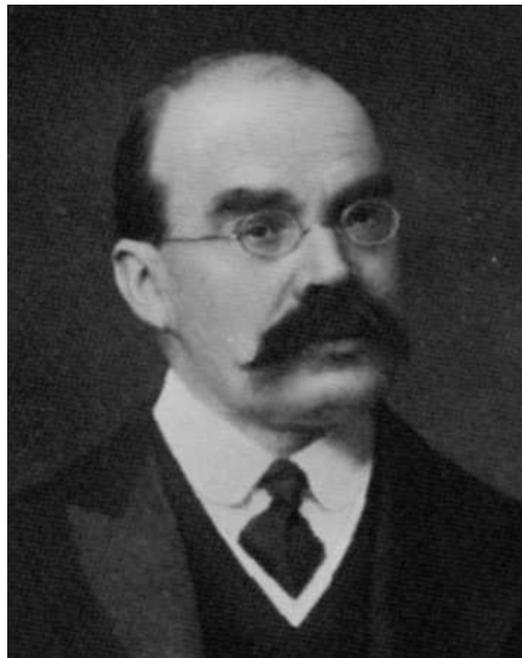


Day	Baro	Therm	Wind	Weather	Mis Observ
Sunday 28	29.84	50	W. or Gale	Clear Sky	
Monday 29	29.90	51	W. or Gale	Clear Sky	
Tuesday 30	29.84	52	W. or Gale	Clear Sky	
Wednesday 31	29.84	52	W. or Gale	Clear Sky	
Thursday 1	29.84	52	W. or Gale	Clear Sky	
Friday 2	29.84	52	W. or Gale	Clear Sky	
Saturday 3	29.84	52	W. or Gale	Clear Sky	
Sunday 4	29.84	52	W. or Gale	Clear Sky	
Monday 5	29.84	52	W. or Gale	Clear Sky	
Tuesday 6	29.84	52	W. or Gale	Clear Sky	
Wednesday 7	29.84	52	W. or Gale	Clear Sky	
Thursday 8	29.84	52	W. or Gale	Clear Sky	
Friday 9	29.84	52	W. or Gale	Clear Sky	
Saturday 10	29.84	52	W. or Gale	Clear Sky	
Sunday 11	29.84	52	W. or Gale	Clear Sky	
Monday 12	29.84	52	W. or Gale	Clear Sky	
Tuesday 13	29.84	52	W. or Gale	Clear Sky	
Wednesday 14	29.84	52	W. or Gale	Clear Sky	
Thursday 15	29.84	52	W. or Gale	Clear Sky	
Friday 16	29.84	52	W. or Gale	Clear Sky	
Saturday 17	29.84	52	W. or Gale	Clear Sky	
Sunday 18	29.84	52	W. or Gale	Clear Sky	
Monday 19	29.84	52	W. or Gale	Clear Sky	
Tuesday 20	29.84	52	W. or Gale	Clear Sky	
Wednesday 21	29.84	52	W. or Gale	Clear Sky	
Thursday 22	29.84	52	W. or Gale	Clear Sky	
Friday 23	29.84	52	W. or Gale	Clear Sky	
Saturday 24	29.84	52	W. or Gale	Clear Sky	
Sunday 25	29.84	52	W. or Gale	Clear Sky	
Monday 26	29.84	52	W. or Gale	Clear Sky	
Tuesday 27	29.84	52	W. or Gale	Clear Sky	
Wednesday 28	29.84	52	W. or Gale	Clear Sky	
Thursday 29	29.84	52	W. or Gale	Clear Sky	
Friday 30	29.84	52	W. or Gale	Clear Sky	
Saturday 31	29.84	52	W. or Gale	Clear Sky	

Acknowledgement: The items pictured in this report are from the Bute Archive at Mount Stuart and the pictures are published by kind permission of the Archive.

## A CENTURY AGO

Elsewhere in this newsletter, we focus on the centenary of the death of Alexander Buchan, but he was not the only distinguished meteorologist who died in 1907. As Joachim Pelkowski mentioned in his talk at the Buchan Centenary Meeting, another was Johann Friedrich Wilhelm von Bezold, an eminent German physicist who is best known to meteorologists for his contributions to atmospheric thermodynamics but also published major papers on colour vision, atmospheric optics, electrical storms, the dynamics of the atmosphere and the theory of terrestrial magnetism. An Honorary Member of the Royal Meteorological Society (elected 1892), he was born on 21 June 1837 and died on 17 February 1907. A short obituary was published in the *Quarterly Journal of the Royal Meteorological Society (QJ)* in 1908 (Vol.34, pp.130-131).



The President of the Royal Meteorological Society in 1907 was Dr Hugh Robert Mill (*pictured right*), the distinguished geographer, meteorologist and oceanographer who was from 1901 to 1919 Director of the British Rainfall Organization. He published in the *QJ* in 1907 (Vol.33, pp.265-274) a major paper entitled "The best form of rain gauge, with notes on other forms", arguing in it that the Snowdon, Bradford and Meteorological Office patterns of gauge were the best and the Howard, Fleming and Glaisher patterns obsolete. For details of the gauges in question, this paper can hardly be bettered.

Another matter which was discussed in the *QJ* in 1907 was one that had been simmering for many years and continued to simmer for many more, the use of the metric system in meteorology. In his paper on this subject (Vol.33, pp.165-168), Richard Inwards stressed "the manifest advisability of adopting for scientific purposes a uniform system by all the meteorological observers upon the globe". To him, observations from around the world should be "compared easily with each other", and he criticized Alexander Buchan and others, saying: "If one contemplates, for instance, any task in which the factors consist of records of rainfall, temperature or pressure over the whole world, the labour of reducing the observations to a common measure is absolutely enormous, and one stands in astonishment at the work of such men as Sir A.Binnie, Dr.Buchan and others who have dared to attack such difficulties". Needless to say, there was no consensus among his audience, as the discussion of his paper shows (pp.168-171). However, those in favour of the metric system were in a clear majority.

Among the other papers in the *QJ* in 1907 was Colonel J.E.Capper's "Note on a balloon struck by lightning" (pp.279-286), this being a fascinating account of a meteorological occurrence at South Farnborough on 11 April 1907. In Capper's words:

This being one of the International Meteorological Observation days, we had a captive balloon in the air carrying a meteorological recording instrument. The balloon was attached to the drum of a wagon by a steel piano-wire; about half a mile of wire was out. Wind almost due East, light on the ground, and probably from 10 miles an hour to dead calm at different times 3000 ft. above the ground. About 3.10 p.m., a sudden thunderstorm came up from east-north-east; very thick and heavy, sulphurous-looking clouds. When the storm was noticed it was coming rapidly on, and it appeared to be too dangerous to attempt to get the balloon down. Heavy rain came overhead at 3.15; at 3.20 a sudden flash of lightning took place along the balloon wire. The flash, according to one observer, seemed to travel down the wire till it reached the wagon, where a sudden bright light appeared and ran right up the wire into the clouds in which the balloon was hidden. This light was of a reddish tinge, and as it ran up the wire was followed by thick, heavy fumes of brownish-yellow smoke (another observer called them grey), which hung about for some little time. On going to the winch we found the wire was fused, being burnt entirely away where it first touched the iron pulleys which guide the wire when running out.

Capper reported in his paper that another lightning strike on a balloon occurred at South Farnborough

on 22 July 1907. Exciting times! More about the International Balloon Ascents in 1907 can be found in papers in the January 1908 issue of the *QJ* (Vol.34, pp.1-5), which contains accounts of balloon ascents made at various locations in the British Isles during the period 22-28 July 1907.

Also in the 1907 *QJ*, we find that Major B.F.S.Baden-Powell, brother of Robert Baden-Powell, the founder of the Scout Movement, delivered before the Royal Meteorological Society on 20 March 1907 a lecture entitled "The exploration of the air". In this lecture (see pp.193-200), Baden-Powell talked about the exploits of Glaisher and Coxwell and other balloonists and showed that he, too, was a keen aeronaut, including in his abstract a photograph of his own balloon, called *Eclipse*. He also discussed kites and gliding machines and mentioned that the Wright Brothers in America and intrepid aviators in France appeared to have "accomplished the feat" of making machines which had "risen by their own inherent power". His lecture included reference to his own man-lifting kites, by means of which, as early as 1895, he had himself made a number of ascents to a height of 100 feet. A photograph of such a kite can be seen on page 198.

Baden Fletcher Smyth Baden-Powell was among those who attended the Royal Meteorological Society's Dinner at The Trocadero on 18 June 1907. For a detailed report of this event, see the 1907 *QJ* (Vol.33, pp.301-308). As the list of those present shows (see p.301), the diners included two famous explorers, Fridtjof Nansen and Ernest Shackleton, as well as a number of men who were, or later became, well-known in meteorology or marine science, among them Dr.W.N. (later Sir Napier) Shaw, Professor Otto Pettersson, Dr.R.H.Scott, Mr.R.G.K.Lempfert, Dr.C.Chree, Mr.R.Inwards, Mr.L.C.W.Bonacina, Sir John Murray, Sir Norman Lockyer and Captain D.Wilson-Barker. A photograph taken at the dinner hangs in the entrance hall of the Royal Meteorological Society's headquarters at Reading and a scanned copy of it can be seen on the Society's website, at <http://www.rmets.org/news/detail.php?ID=391>.

In his speech at the dinner, Dr.Mill made the surprising statement that the Society "had survived the shock of introducing Lady-Fellows"! This was, for a number of reasons, a strange thing to say, one of the reasons being that there had been Lady Members of the Society as early as 4 April 1850, the second day of the Society's existence, and the first Lady Fellow (Eleanor Ormerod) had been elected as long ago as the 1870s.\* Moreover, the 1906 Membership List of the Society (there wasn't

one for 1907) shows that several Ladies were then Fellows, including Mrs Elizabeth Isis Kent, who had been a Fellow since 1882. One can but wonder now why Mill made such an apparently male-chauvinistic statement on such a public occasion and why the introduction of Lady Fellows should ever have been a shock. We shall probably never know what made him say what he did.

\* For members of a society to be designated Fellows, a Royal Charter is required. The Royal Meteorological Society was granted its Royal Charter in 1866 and thereupon changed its name from British Meteorological Society to, simply, The Meteorological Society. Permission for "Royal" to be added to the Society's name was granted by Queen Victoria in 1883. Thus, the Society's members put MBMS after their names until 1866, FMS from 1866 to 1883 and FRMetS or FRMetSoc from 1883 onwards. The use of FRMS was not allowed because the Royal Microscopical Society, founded in 1839, had been given permission to use "Royal" in their title in 1866, at the same time as their Royal Charter was granted. This difficulty continues to this day, hence the Royal Meteorological Society nowadays using the abbreviation RMetS, rather than RMS.



*50 Great George St  
Westminster S.W.  
May 9 1872*

This image shows the logo of The Meteorological Society, as the Society was called from 1866 to 1883

**Malcolm Walker**

## THE ACRE PROJECT

History Group member Rob Allan of the Met Office's Hadley Centre has obtained funding for an exciting three-year project. It's called ACRE, which stands for Atmospheric Circulation Reconstructions over the Earth; and the project includes another acronym, CDSI, which stands for Climate Data Support Initiative.

Rob says that ACRE will support the data requirements of pioneering historical climate quality reanalysis projects based only on surface observations over the globe. The initial focus will be to support the Twentieth Century Reanalysis

Project, which will produce a global reanalysis product of weather conditions every six hours from the surface to the tropopause at 2x2 degree global resolution through the assimilation of only surface climate variables (e.g. mean sea-level pressure and sea-surface temperature) on sub-daily time scales from 1892 to the present. This will provide the basis for further extensions of reanalyses of surface observations back in time. There is currently sufficient surface observational data coverage for global reanalyses back to the mid-nineteenth century; and there is sufficient over the North Atlantic – European region from the mid-eighteenth century to the present.

Most recently, Rob's ACRE project has received funding from DEFRA for historical marine data imaging and digitisation over the next two years. Monies of the order of £200,000 have been made available this financial year to image and have digitised (via the Climate Data Modernisation Program [CDMP] in the US) the ship log books of the British East India Company (EIC) held in the British Library. Some 2,000 EIC ship log books cover the period around the 1780s to 1830s, with about 900 log books containing instrumental observations. The EIC logs have data for the North and South Atlantic oceans, the Indian Ocean and the South China Sea. In addition, a small amount of monies will be used to complete the digitisation of Antarctic expedition supply ship log books for the first 20-30 years of the 20<sup>th</sup> Century. Over the 2008 financial year, another £200,000 from DEFRA will be used to image ship log books for an extended World War 1 (WW1) period over the globe (1914-1923). It is estimated that there are over 7,000 WW1 ship log books held in the National Archives. The 2008 funding will only be enough to get them imaged, and additional funds will be sought to have them digitised.

Rob wonders whether the following areas might be of interest to History Group members and could form part of the CDSI aid to ACRE and its historical reanalyses objectives:

1. Identification and recovery of old weather observations from the UK and abroad held in the libraries of old UK houses (National Trust, private, etc), societies, etc. and in private hands. ACRE would be most interested in pressure records.
2. Linking/working directly with the ACRE initiative to help with the recovery and interpretation of old terrestrial and marine weather observations from the UK and abroad. He is thinking here of looking to the experience of some History Group members who may themselves have worked on such data in their former professional capacities.

Climate scientists are nowadays very keen to get their hands on historical data. There was a time when some, if not many, meteorologists scorned climatologists as weather stamp collectors, but climate scientists now cannot get enough data from the distant past. They have voracious appetites for weather diaries, ships' logs, etc., etc., and this is where History Group members may be able to help. Weather diaries are still turning up in libraries, archives, country houses, etc., and some History Group members may be willing to help find old data. Just a simple enquiry in the Local Studies Collection of Cardiff Central Library some years ago, for example, discovered a weather diary kept by Colonel James Capper in Cardiff from the mid-1790s to about 1805. And we saw weather observations from the early 18<sup>th</sup> century when we visited Mount Stuart on the Isle of Bute in early September. Seeking old weather diaries and ships' logs may be an occupation that will appeal to some History Group members. Using the data will be the province of climate scientists, but History Group members may care to investigate why the observations were made and by whom and for what purpose and with what instruments, which is very much a main-stream History Group activity. If you would like to help in any way, please contact Rob Allan, ACRE Project Manager, Hadley Centre for Climate Change, Met Office (rob.allan@metoffice.gov.uk or telephone 01392 886904). You can help by simply telling Rob where you have found old weather records, or you can help Rob actually interpret the observations. The ACRE project WWW site can be found at: <http://brohan.org/hadobs/acre/acre.html>

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### **ICHM CONFERENCE - Weather, Local Knowledge and Everyday Life**

Museu de Astronomia e Ciências Afins (MAST)  
Rio de Janeiro, Brazil, 26-30 May 2008

The International Commission for the History of Meteorology (ICHM) invites papers and session proposals for an interdisciplinary conference on 'Weather, Local Knowledge and Everyday Life,' at MAST in Rio de Janeiro, Brazil, 26-30 May 2008 ([www.weatherlife.org](http://www.weatherlife.org)).

The conference will explore how people engage, create sciences about, ascribe meanings to and base everyday actions upon the weather, in history and today. We'd like to look the ways in which weather *really* matters in different places at different times to different people and how various disciplines conceptualize the evolution of climatological citizenship as it manifests itself in daily routines, rituals, perceptions, reactions to and

uses of the weather. We want to bring to light the fact that people worldwide engage with the weather not as individuals only, but also as members of a family, extended community, city, region, or nation and as bearers of religious, ethnic, professional and otherwise 'tribal' identities. How have people conceived of, remembered about and acted in relation to the weather? What are the ways in which the public 'takes the weather in their hands' and what is the perceived role of expert knowledge in providing the information and warnings about the day-to-day and extreme atmospheric events? How do local and indigenous forms of weather knowledge interact with globalizing discourses and representations? Speakers include Katherine Anderson, Gary Alan Fine, Ben Orlove, Renzo Taddei and Mick Worboys. Organizing committee: Vladimir Jankovic, Cornelia Ludecke, James Fleming, Samuel Randalls.

Please submit paper or session proposals by 1 Dec. 2007 to [vladimir.jankovic@manchester.ac.uk](mailto:vladimir.jankovic@manchester.ac.uk)

### PUBLICATIONS AVAILABLE

Items available for the cost of the postage. Apply to **Eric Harris** at R.Met S.

H.M.S. Challenger. Magnetical Observations & Contributions to Terrestrial Magnetism 3 volumes. Heavy!

The Meteorological Record. Monthly results of summaries at R Met S stations  
March 1881 - December 1890, 1891 - 1900.

A.G.M. Reports of the British Meteorological Society 1851- 1861

Meteorological Glossary 4th. Issue, 1918 pp 358

The Ocean of Air, Meteorology for Beginners, A. Giberne. Spine cover loose. With dedication to "Bert" Simpson, from his brother George!

A reprint of Appleton & Watson Watts paper, Proc R Soc A Vol III, 1926

"On the nature of Atmospherics", Parts II & III, pp 615-677. with attached, a letter, 17 April 1937, from Appleton to Simpson.

"On a new hygrometer .....", Daniell, J.F., London, 1822. pp16

"Dawes's Meteorological Journal, 14 September 1788 to 12 June 1790" reprinted as Australian Bureau of Meteorology Historical Note 2. pp 28 + microfiche.

"Zeppelin Raids, Meteorological conditions during raids" January to September 1915. Air Department (Met. section) October 1915, pp10

### Members 2007

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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)  
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Mike Collins (Frinton on Sea )  
Phil Collins (Okehampton)  
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Peter Wickham (Wokingham)  
Clive Wilkinson (Diss)  
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 – if your sub is due at the end of 2007 you will have received a reminder with this newsletter