

HISTORY GROUP NEWSLETTER



News, views and a miscellany published by the Royal Meteorological Society's
Special Interest Group for the History of Meteorology and Physical Oceanography

Issue Number 2, 2018

December 2018

News

Julian Mayes, Secretary / Newsletter editor

Welcome to the 2nd History Group newsletter of 2018. Particular thanks to Brian Booth for his series 'Faces from the Past'. Coming soon after the centenary of the end of the First World War, the article in this issue focusses on a life lost in this conflict. We also have a report on the recent meeting *From HMS Challenger and Argo and beyond*. This was a great success and we extend thanks to Dr John Gould for organising it. John has also contributed an article to this issue of the newsletter on an early advocate of ocean observations. There will be another issue of the newsletter early next year which will carry news of planned meetings.

Membership is steady at 89. Since the last newsletter we have learnt of the death of member Mr Brian Dagnall at the age of 96.

My thanks to Marcia Spencer of the RMetS Headquarters team for distributing this issue.

Julian Mayes

Vacancy for Steering Committee Chairman

In 2015, ill health forced Malcolm Walker to stand down from Chairmanship of the Steering Committee of the Society's History Group. For a short period, the Society's Chief Executive, Liz Bentley, stood in as Acting Chairman while a permanent replacement was found.

In January 2016, Norman Lynagh took over as Chairman and has continued in that role to the present day. Unfortunately, due to unexpected

increasing demands in both his private life and work life he finds that it is becoming increasingly difficult to devote as much time to History Group matters as is necessary. He has therefore given notice that he would like to stand down from the role as soon as an appropriate replacement can be found.

The role of the Chairman is to co-ordinate the activities of the Group, with assistance from the members of the Steering Committee. The Group is active in all historical matters, including scientific, social and cultural history. The Chairman also chairs the meetings of the Steering Committee which are held twice a year at the Headquarters of the Society in Reading. He also represents the History Group at meetings of the Society's Meetings Committee.

There are no specific qualifications necessary for the post of Chairman but an interest in some aspect of the history of meteorology and physical oceanography is obviously desirable and it is preferred that candidates for the post are already members of the History Group. It is a post that would be well suited for a recently retired professional meteorologist who still has a good network of contacts within the profession but individuals with other backgrounds may be equally well suited.

There is no formal application procedure for the post. Anyone who may be interested in it should express that interest by e-mail to

history@rmets.org

The e-mail should include a brief CV and a statement of what you would bring to the role.

Full contact details should also be included. While there is no specific deadline, applications should be submitted as soon as possible as it is hoped that the new Chairman can be appointed by early in 2019.

MEETING REPORT

From HMS Challenger to Argo and beyond

National Oceanography Centre, Southampton

Despite the best efforts of the South Western Railway to maroon your Secretary in Woking (ice on the conductor rail), over 50 of us gathered at the excellent venue of the National Oceanography Centre in Southampton on 21 November. This meeting was a great success, a collaboration between our Group, the RMetS and the Challenger Society. The audience ranged from retired ocean scientists to students at NOC / Southampton University.

The significance of the Argo floats in transforming the volume of observations available from the oceans was clearly outlined by Dr John Gould (NOC and the History Group). Introduced in 2000, there are now as many as 4,000 Argo floats in use worldwide. In another fascinating talk, Dr Brian King (NOC) explained how the floats operated and how they transmitted their observations of temperature, salinity and ocean currents to satellite when they surface. Several speakers referred to the way in which most of the heating associated with global warming ends up in the deep ocean where warming since 2010 has been profound. Later contributors spoke of the global coordination of ocean measurements and even the roles of ocean gliders (these can go where the Argo float can't) and even the development of sensors positioned on seals.

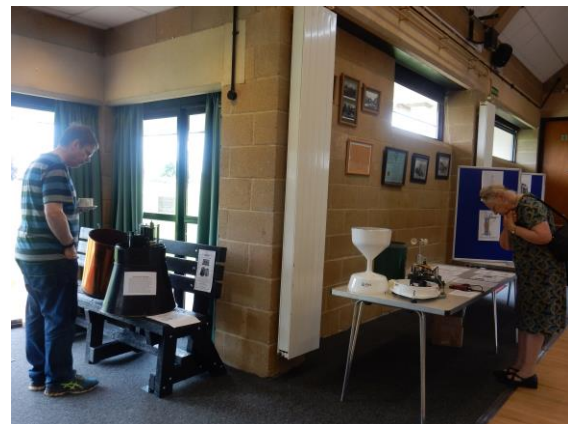
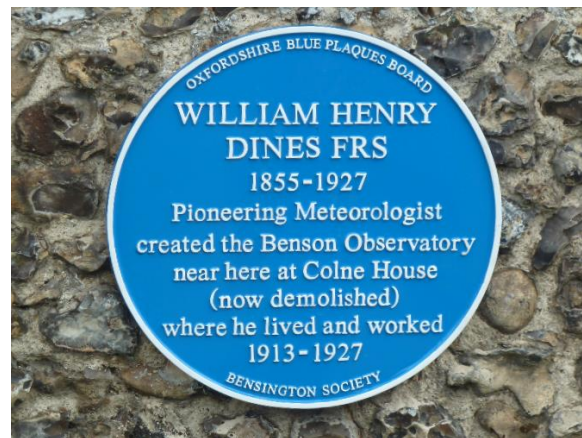
The meeting ended with an appeal from Dr John Gould and Prof Chris Folland on the need to capture data, photos and other informal archival material before it is discarded. The Challenger Society is keen to collaborate with the History Group in order to achieve this goal,

a joint concern in ocean science and in meteorology / climatology.

Julian Mayes

Memorial plaque unveiled for W. H. Dines

As mentioned in the last newsletter, in June a plaque was unveiled in honour of W. H. Dines in the Oxfordshire village of Benson close to where he lived and carried out much of his work. This took place on 9th June 2018 and was accompanied by an exhibition of relevant exhibits. The former BBC weather forecaster Bill Giles spoke at the event.



Plaque to W. H. Dines in the Oxfordshire village of Benson and the display of accompanying exhibits at its unveiling in June 2018. Photos supplied courtesy of David Cooper who was involved with organising the event.

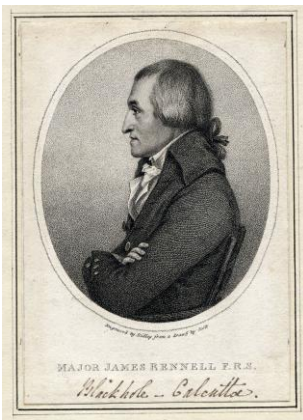
John, The second Lord Wrottesley

An early advocate of ocean observations

Dr John Gould

Emeritus Fellow, National Oceanography Centre, Southampton, UK.

In the 19th century two people, one each side of the Atlantic, started to collate oceanographic observations and for the first time to systematically map the patterns of ocean currents. The first was Major James Rennell, FRS, who had been Surveyor-General of Bengal and who took an interest in the currents of the Atlantic and Indian Oceans and off South Africa as he sailed back and forth between India and Great Britain. His work on Currents of the Atlantic Ocean was published by his daughter Jane Rodd in 1832 two years after his death.



Rennell's work was developed further by the second, Lt. Matthew Fontaine Maury of the US Navy. An accident in 1839 when he was 33 prevented Maury from pursuing an active seagoing career and he therefore developed an interest in navigation and made an assiduous study of winds and currents derived from ships' dead-reckoning. In 1842 he was appointed Superintendent of the US Naval Observatory in Washington D.C. and in 1855 published the first edition of his seminal work "The Physical Geography of the Sea". The book described both the winds and currents of the oceans and also their relationship to ocean temperatures.

Major James Rennell (1742-1830)

The motivation for Maury's work was in large part commercial since by knowing the patterns of major currents such as the Gulf Stream ships' masters could use them to aid their passage or avoid adverse currents on voyages between ports on the east coast of the USA and the British Isles. The Gulf Stream had first been described in a chart published in London by Benjamin Franklin working with his cousin Timothy Folger in 1770 and in 1775 Franklin also began to realise the relationship between the position of the current and sea temperatures.



Matthew Fontaine Maury (1806-1873)

The first and second editions of Maury's book were dedicated to George Manning of New York who had been instrumental in distributing Maury's charts but a new edition published in London in 1859 bears the dedication "To The Lord Wrottesley - as a tribute of friendship, and a token in acknowledgement of the value of the services rendered by his Lordship towards the establishment of a universal system of meteorological observations at sea, from his obedient servant, the author". So who was Lord Wrottesley?



The reference is to John, the 2nd Lord Wrottesley born on August 5th 1798; an English landowner whose estate was a few miles northwest of Wolverhampton. He had developed a passion for astronomy and became President of the Royal Astronomical Society (1841-2) and later President of the Royal Society (1854-8). So how did a landowner from the English Midlands come to be the subject of the dedication in a book on the oceans by an American?

It is not clear how or when Maury and Wrottesley first corresponded but on 26 April 1853 Wrottesley made a long speech to the House of Lords extolling the virtues of Maury's work and seeking government support for the collection and compilation of meteorological and oceanographic (although he did not use the term), measurements.

John, 2nd Lord Wrottesley (1798-1867)

He opened his address by stating how Maury's work had been studied and endorsed by the Royal Society and the newly-formed British Association for the Advancement of Science but that

"the plan ...,was favourably considered by some of (the governments') most influential members; the resolution, however, of the late Board of Admiralty communicated by their letter of the 17th of July last, "not to form any separate establishment for the purpose of recording the observations,"

He continued with further criticism of actions by the Admiralty

" There is one circumstance only which creates a misgiving on the subject; and this is a step which has lately been taken by the head of the Admiralty, who has ordered home ships employed on the maritime survey of the British coasts, and suspended those surveys. It is calculated that about £15,000 yearly will be saved, as it is called, by this measure; but so far as I have had any opportunity of hearing the opinions of competent persons, there seems to be a general feeling of regret that the Government should have decided on crippling an important scientific department of the naval service of the country, and that upon grounds which, upon inquiry from the best authority, I find to be wholly untenable".

It seems clear that Wrottesley was advocating a long-term strategic approach whereas he saw only short-sightedness on the part of the Admiralty and the Government that ran counter to the view of Britain as the pre-eminent maritime power.

"But to which (country) does he (Maury) look with the most longing eyes and the best hopes of success? Of course to the nation of whom the poet ¹sings— "Their path is on the mountain wave, Their home is on the deep." - to his brethren at this side of the Atlantic".

¹ Thomas Cambell. 1774-1844. Ye Mariners of England (<http://users.compaqnet.be/cn127848/obev/obev167.html>)

“What do the Royal Society say on this point? But it is to the Government of this country that the demand for co-operation, and for the interchange of observations, is most earnestly addressed by the Government of the United States; and the President and Council of the Royal Society express their hope that it will not be addressed in vain”.

His address contained a long and detailed description of the knowledge of ocean currents and described the work of Maury, Rennell and Franklin and Folger and as a practical example he exclaimed that the use of such knowledge might be described as *“How Dr. Franklin, by dipping a thermometer into the sea, made New York a flourishing city, and ruined the trade of Charleston, in Carolina”*. He also commented on the vital role played by observations at sea, in understanding meteorology and hints at the recent advances in the technology of making observations.

“There is no subject which is more perplexing than the science of the weather; the phenomena are so various and so complex that at one time philosophers despaired of eliminating any general laws; but the prospect is now brighter, a vast step has been made by the invention of self-registering instruments, the beautiful applications of electricity to that object, and by the establishment of numerous magnetic observatories, at all of which meteorological observations are made; but the sea may be described as the spot on which all the phenomena are in their most regular and normal state, uninterrupted by casual causes, such as unduly heated surfaces, mountain ranges, and so forth”.

In conclusion he extolled the benefits of basic science, to the nation.

“...happy shall I be if I have succeeded in convincing you that the principal matter discussed is worthy of your attention, and of that of the Government and nation; and that it is the bounden duty and interest of a country, which has risen to an unexampled state of wealth and prosperity by the application of science to art, to hold out to science a protecting and fostering hand”.

By 1853 a number of major maritime nations had been recording and exchanging weather information for several years driven by Maury’s enthusiasm and by international respect for his studies of ocean currents and winds. A Maritime Congress planned for August 1853 in Brussels at which Britain was to be one of 10 nations to send a delegation. The conference was held *“to establish a uniform system of meteorological observations...”*. Surprisingly Wrottesley made no reference to the Congress in his speech. The Congress resulted in the definition of the parameters to be measured - pressure, wet and dry bulb temperature, wind, cloud, sea surface temperature and sea temperature. The delegates also adopted a standard format to be used by Naval vessels and another one for merchant ships to record their observations. The final report of the Conference was prepared by Maury and F.W. Beechey, R.N. one of the British delegates.



Wrottesley Hall. It was destroyed by fire in 1898

In the UK there had been four motivations for participation in the Congress. The first was reduction in the perils of sea voyages, the second was improvements in the profitability of trade (the original driver for Maury’s interest in maritime observations), the third was the

possibility of military advantage from the prediction of storms and finally there was the interest in meteorology and the ocean from a purely scientific standpoint. It was this latter aspect that seemed to have interested Wrottesley. Following the conference Maury, accompanied by his wife, two eldest daughters and two cousins, came to England and was entertained at Wrottesley Hall.

There had not been any great enthusiasm for participation in the Conference on the part of the British Government or the Admiralty and it was perhaps Wrottesley's speech and an intervention by Sir Robert Inglis in the House of Commons on July 13th that changed the situation. Admiral Berkeley, the First Naval Lord, had replied to Inglis that:

"Her Majesty's Government were prepared to enter into, and to take their part in, any well-digested plan for effecting the object in view (Maury's system of observations). With regard to the Royal Navy, most of the observations required, such as related to currents, wind, tides, depth of water, and temperature, were already called for from the commanders of Her Majesty's ships by the Admiralty. But with regard to the mercantile marine, there was very great doubt, as well as very great difficulty, how the object was to be attained. When he stated that in thermometers alone, if they were supplied to the mercantile marine, the cost would amount to £3,500., and that there were fears whether they would be much used, he thought it would be seen that there was much difficulty as regarded this part of the question".

There was clearly scepticism in Naval circles about the contribution from merchant vessels.

But progress was made. In 1850 the Government had formed a Marine Department within the Board of Trade and 1854 was the year in which the Government did take action even though it had been preoccupied with the looming Crimean War. In February it signalled its intention to establish a new Meteorological Dept. within the Board of Trade. The Royal Society had been consulted and Wrottesley who was soon to become its president had consulted extensively with Capt. Robert FitzRoy RN who had commanded HMS Beagle on Darwin's 1831-36 global voyage as to how such a department might be run. It was therefore not surprising that FitzRoy should have been appointed on August 1 1854 as the Superintendent of the Meteorological Dept.

Subsequent to the Conference Wrottesley turned his attention to more general aspects of the Government support for science. Stating in the introduction to a paper in the Monthly Notices of the Royal Astronomical Society

" however humble my powers may be, I can more effectually promote the interests of science in the way of counsel rather than action-in the cabinet rather than the field"

again noting that a nation did not benefit solely from what would today be referred to as applied research.

It is in the work of the Meteorological Dept. of the Board of Trade under FitzRoy that we find the roots of the present day UK Met Office that retains within its remit responsibility for meteorological observations over the oceans and for the processing of a wide range of in-water observations.

The importance of ocean observations for both understanding climate variability and change and for improving seasonal forecasts is now fully recognised. However the frustration of Wrottesley in the Government's and the Navy's reluctance to make a full commitment to supporting Maury's scheme has remarkable parallels today. The UK was an early participant in the Argo (<http://www.argo.ucsd.edu/>)

profiling float array to collect temperature, salinity and current data from the global ocean. Argo is now the major source of ocean temperature and salinity profile data. The UK contribution of approximately 140 floats, (from the global total of just under 4000), is funded jointly by the Met Office and NERC laboratories. The RN was an early partner but in 2011 (158 years after Wrottesley's speech) withdrew its contribution to the UK Argo programme.

Who is today's Lord Wrottesley, who can be an advocate for systematic ocean observations in the corridors of power?

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Home just in time!

The 2018:1 issue of the Newsletter contained the interesting article by Peter Rowntree - *The exceptional cold spell of January 1776*.

Someone who had more first-hand experience of weather conditions during the 1700s than most was John Wesley. He regularly travelled 5000 miles per year on horseback to preach in many parts of the country. He related his travels, including his observations about the weather, in his diary. This was subsequently edited and published in regular instalments so his followers could read it.

Early in January 1776 he had journeyed from London to Bristol and his entries from Saturday 6 January read as follows:

Sat. 6. – *I returned to London; and I returned just in time; for on Sunday, 7, the severe frost set in, accompanied so deep a snow, as made*

even the high road impassable. For some days before the frost broke up, it was observed, by means of the thermometer, that the cold was several degrees more intense than that in the year 1741. But God then removed the cup from us, by a gentle, gradual thaw.

Summaries of all of John Wesley's comments about the weather are reproduced in the History Group's *Occasional Paper* 15 which is available online¹. A far more complete record of Wesley's observations on a wide range of physical and human geography topics is published in my book *John Wesley Travelling Geographer*. Remaining copies can still be purchased via *ebay*.

Howard Oliver

¹ <https://www.rmets.org/scientific-papers>

**Faces from the Past - Edward Thomas Streets
16 January 1897 - 12 April 1917**

Brian Booth, Devizes

I am extremely grateful to Lesley Walter for providing the photograph of her great-uncle, Edward Streets, as well as extracts from his letters and invaluable assistance in compiling this biography from family documents. Details of his movements in France are based on the War Diary of the 1/5th Battalion (London Rifle Brigade). Daily Weather Reports covering October 1916 to April 1917 have also been referred to, although the few French reports appear at times to be at odds with descriptions of Arras weather reported elsewhere.

The third of Henry and Mary Streets' six children, Edward was born in Hampstead on 16 January 1897. Four years later his father, a tailor, moved the family to the outskirts of Willesden after buying a house there for £450 (about £52,000 in 2017). It remained Edward's home for the remainder of his life.



He was educated at the nearby Dudden Hill School, remaining there until his 18th birthday. On leaving school he joined the staff of the Meteorological Office Headquarters in Exhibition Road, Kensington. His employment was on a temporary basis, filling one of several vacancies caused by voluntary enlistments of permanent staff into the Army or Royal Navy following the declaration of war the previous August.

There is no record of what his job involved, although there is circumstantial evidence that he received training in observing and chart-plotting.

Edward (Ted) Streets circa 1915 (Lesley Walter collection)

*Met Office Headquarters at Exhibition
Road, Kensington*

(© Meteorological Office)



The following year Edward received his call-up papers, and on 28 March 1916 attested as a Private in the 1/5th Battalion, London Rifle Brigade (LRB). At the time permanent Civil Service employees called up for military service had their army pay made up to Civil Service rates. Unfortunately for Edward, as he had only been employed on a temporary basis he was ineligible for this supplement;¹ instead he received an infantryman's standard pay of 1 shilling per day (about £4.50 in 2018).

Along with other LRB recruits he transferred to the 3/5th Battalion LRB² for training at Fovant, some 13 km west of Salisbury, Wiltshire, in the middle of April.

Edward's first impressions of the Army were less than enthusiastic; apart from inoculations giving him a sore arm, he found the repetitive training of *squad drill and forming up in fours* monotonous, while the crowded conditions of the accommodation huts made sleeping difficult. As for Fovant village it was

*a very pretty place but my word, it is slow. We certainly have a picture palace (???) such as it is, but as for girls, well, I haven't seen one hardly since I have been down here. I shall certainly have to make up for it this when I am home on leave in about 6 weeks' time I hope.*³

It was not all bad news:

One thing, our food continues to be fairly good and there is usually plenty of it, and of course that it one of the chief items so we must be thankful for that.



Army training camp at Fovant looking north, circa 1916. Source unknown

Training continued until the end of July when, after a final home leave, he embarked at Southampton for France. Arriving at Le Havre the following day, 3 August, he was sent to the nearby 56 Infantry Base Depot.

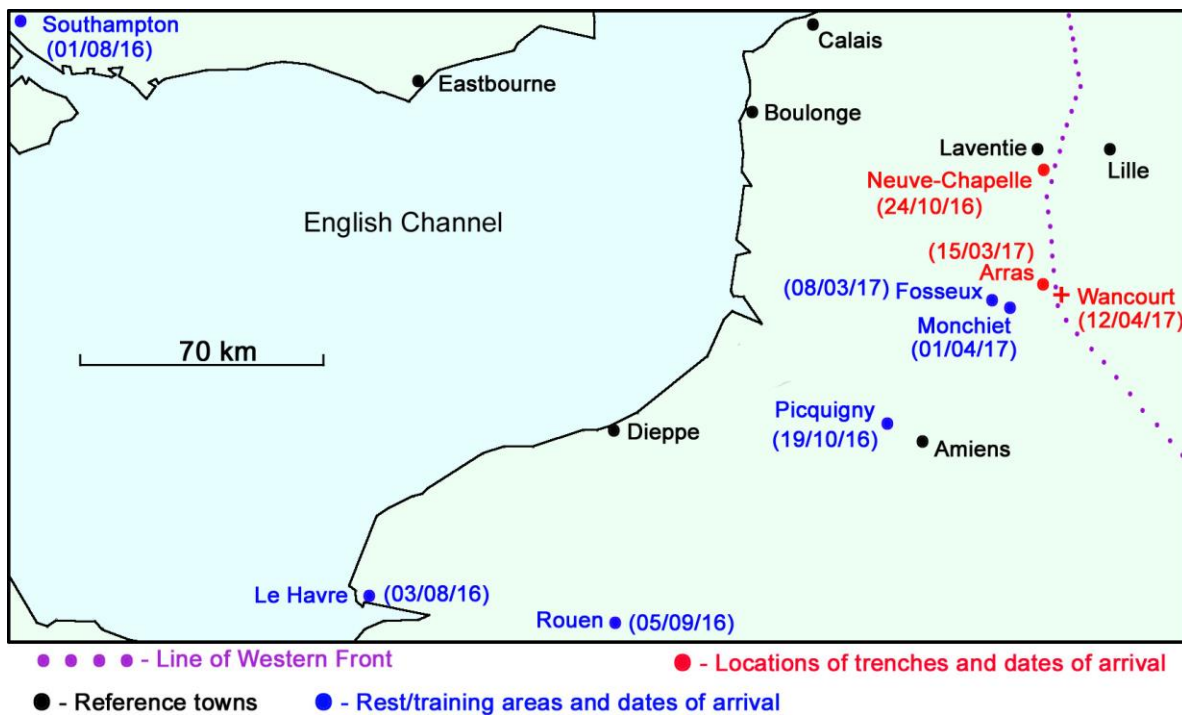
On 26 August, whilst receiving further training in preparation for life on the battlefield, Edward wrote to the Director of the Meteorological Office, requesting a transfer to the Meteorological Section (Royal Engineers) (otherwise known as Meteor (RE) citing of his meteorological interest and background. The letter was discussed on 13 September at a meeting of the Meteorological Committee, but as such a transfer was considered to be a military matter his request was referred to the Meteor (RE).⁴ Despite

the fact that the unit was always in need of men with meteorological experience, his request fell on deaf ears. Ironically the same meeting also discussed a letter from the War Office authorising

a further reserve of three (meteorological) observers on account of the difficulty of finding suitable men at short notice!

Edward was next attached to the 2nd Entrenching Battalion, believed to have been at Rouen, for yet more training in trench warfare (digging trenches), arriving there on 5 September. He appears to have almost liked it there and on 16 October he wrote home

We should all have liked to stay here for the winter before continuing but this morning we were informed we were under orders to move to join the battalion. The news was rather sudden and unexpected and consequently the majority of us have rather got the 'wind up'.



The map shows a summary of Edward's movements from when he sailed for France at the beginning of August 1916, until his death on 12 April 1917. (© B J Booth)

His draft of 41 men joined the 1/5th Battalion LRB on the 19th. Two days later the Battalion was on its way to the trenches in the Neuve-Chapelle sector of the front-line, reaching its billets on the 24th. On the 28th Edward found himself in the trenches for the first time. For the next four months life became a cycle of a week or so in muddy trenches followed by the same in rest areas in the vicinity of Laventie. The weather was mild and often wet with heavy rain at first, turning the battlefield into a quagmire of deep, clogging mud and flooded trenches.⁵

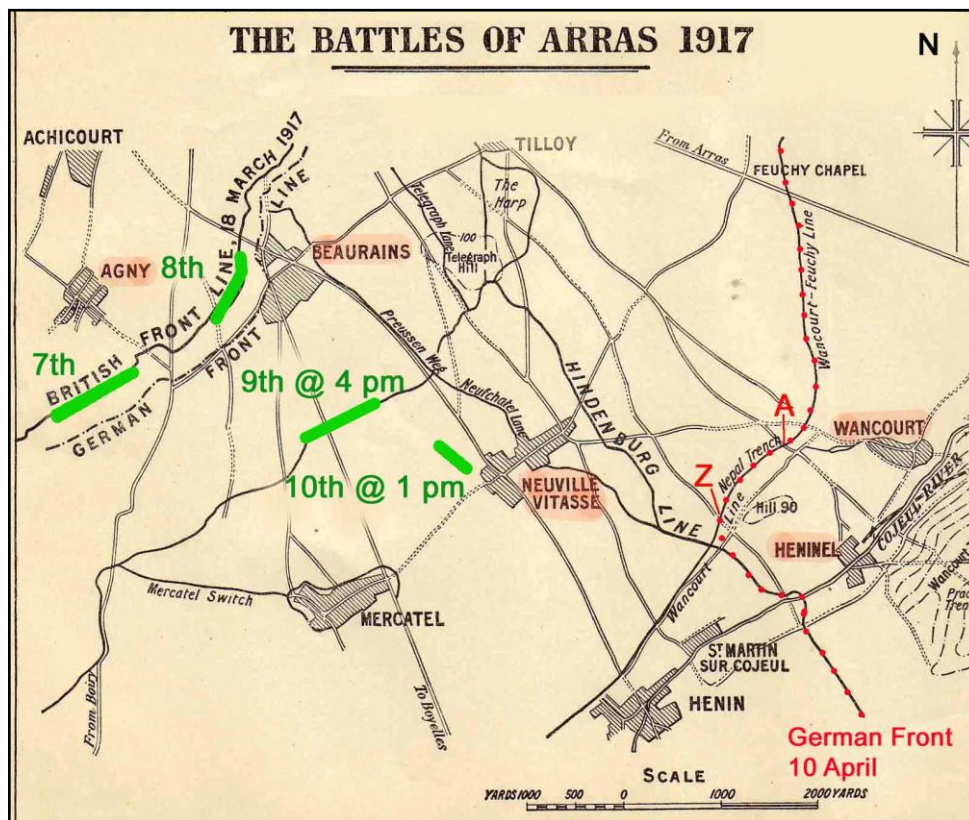
Christmas was spent in the trenches, but it was not a quiet Christmas. To dissuade German troops leaving their trenches to fraternise with British troops, the Corps Commander ordered a complicated programme of artillery, machine gun and rifle fire to be maintained from the 24th until the 27th - whether it served its purpose is not recorded, but it used a considerable amount of valuable ammunition!

Small wonder Edward, like all his comrades, greatly appreciated food parcels from home. Tins of cream and pineapple were especially well received as was tobacco *which smokes well in my new pipe*. He described Christmas Day 1916 as being *the same as any other day*. The Christmas dinner was *Army stew, politely called 'skilly', followed by a second course of bread and cheese. The third and fourth courses were 'naphooh'*.⁶ Back behind lines at the end of the year he was grateful for another food parcel, and prayed for the end *to this rotten business*.

The mild weather persisted into early January, but then temperatures fell, and from the 23rd overnight temperatures were consistently below -5°C, then -10°C from the 29th. The intense cold made the ground iron hard and the previously flooded areas were covered by thick ice. A soldier's letter written on the 23rd described the conditions as *snowy and very slushy and beastly generally*,⁷ and another on the 26th spoke of *hard frosts and clear days; ground like iron and covered in snow and bitter wind*.

The bitterly cold weather with exceptionally low overnight temperatures persisted into February, the coldest night being the 3rd - 4th when -18°C was recorded by Edward's unit.. It was not until mid-month that milder weather brought some relief, the night of 16th - 17th being the first to be frost-free for a month.

On 1 March the Battalion was withdrawn from the front line, and during the next eight days marched over 150 km to a rest camp at Fosseux. It was not an easy journey, with frosts by night and fresh to strong easterly winds by day, even a violent snow storm as the men approached the camp on the 8th.



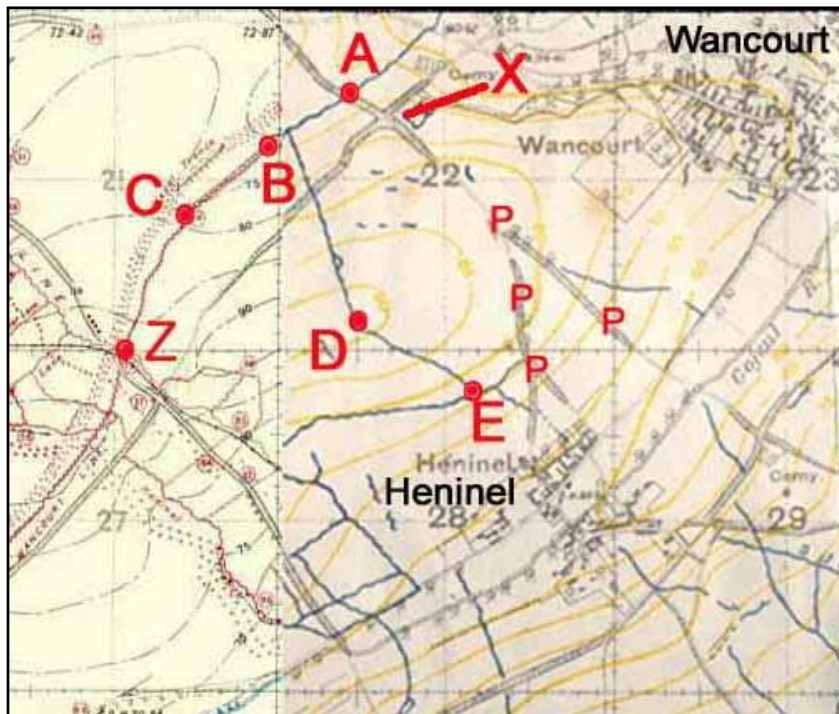
Map A. Edward's movements in April 1916, immediately prior to his death near Wancourt on the 12th. The Western Front on the 11th was aligned north-south just west of Wancourt.

After a week at rest the Battalion marched east to occupy trenches in the Arras sector. It was withdrawn for rest at the end of March, this time at Monchiet. The Battalion's War Diary recorded heavy snow during 2 April, but otherwise the weather was unremarkable during the first week of April. Although the men were unaware of it, the Battle of Arras was due to start on 8 April, and on the 7th they marched to old British trenches just south of Agny and rested overnight. In the event it was postponed for 24 hours, and the following day, after leaving their personal belongings at Archicourt, and collecting iron rations and ammunition for three days, the Battalion spent the night of the 8th in old trenches near Beaurains.

9 April saw the start of the Battle of Arras at 0530 hours, which coincided with the passage of a cold front; it was accompanied by heavy snow and strong winds which created deep drifts in places. The weather was severe enough for Sir Douglas Haig, the Commander in Chief of the British Forces in France and Flanders to make reference to it in his despatch

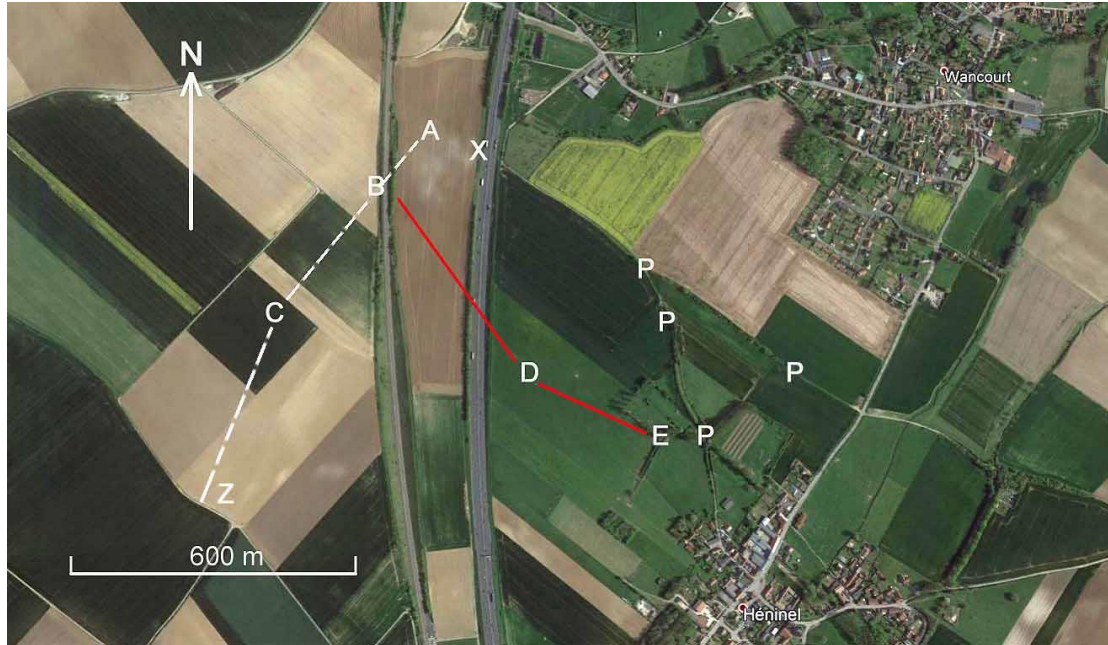
For some days prior to the 9th April the weather had been fine, but on the morning of that day heavy showers had fallen, and in the evening the weather definitely broke. Thereafter for many days it continued stormy, with heavy falls of snow and squalls of wind and rain. These conditions imposed great hardship on our troops, and rendered all movements of troops and guns slow and difficult.⁸

The LRB was not involved in the initial assault, but instead moved forward to trenches evacuated by German troops south of Beaurains. On the 10th the men moved trenches captured the previous day at Neuville-Vitasse. The following day (11 April) the LRB saw its first action in the battle, the clearance of enemy troops from the Wancourt-Feuchy Trench from south (Z) to north (A), accomplished by sending bombing parties north along the trench from Z. By dusk of the 11th the trench was in British hands, the 1/5th occupying the sector from C to A.



Map B. Detail of the area near Wancourt in which Edward lost his life on 12 April.

The following day, surrounded by a desolate quagmire of mud and water-filled shell-holes, Edward's unit, B Company, was ordered to support A Company clearing another trench (B-D-E) preparatory to the Battalion advancing on Wancourt during the 12th. The men set off soon after 1115 pm on the 11th, and by dawn had completed the task; 17 enemy troops had been killed in the process. It is believed that it was during this period, in the quagmire of mud and flooded shell-holes, that Edward lost his life.



Map C. Google Earth imagery showing 1917 trench map positions from Map B. Farm tracks now mark the lanes on which the strong points (P) were established.

The 1/5th lost just five men during the 12th, but only one body was found, so it is probable they were killed during the night action. Their names are remembered on the Arras Memorial, but it is highly likely they lie close to the red line B-D-E on the Google Earth map. When the Battalion moved into Wancourt during daylight on the 12th it was accomplished without significant action, the village being found to have been practically demolished and largely abandoned enemy troops.

Five Met Office staff lost their lives during the First World War, but when *Annual Report of the Meteorological Committee* for 1919 was published Edward's name was missing from the Roll of Honour. This may have been because he was 'only' a temporary employee, and it was not until a later that his name was rightly added to those of his colleagues.

Arras War Memorial



Notes

1. Minutes of the Meteorological Committee for May 1916
 2. The 3rd/5th Battalion LRB was a reserve unit formed for training recruits prior to overseas service.
 3. Extracts from family letters.
 4. Minutes of the Meteorological Committee for September 1916
 5. National Archives file WO 95/2961; War Diary of the 1/5th London Regiment, the London Rifle Brigade.
 6. 'Skilly' is a thin broth made from oatmeal and water, flavoured by meat. 'Naphooh' derives from the French term *il n'y a plus*, meaning *none left* or, as in this case, *nothing else*.
 7. www.arthursletters.com
 8. <https://www.thegazette.co.uk/London/issue/30462/supplement/429>
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News from the National Meteorological Library and Archive

The NMLA have had a busy few months on many different fronts. Work is nearly complete on the refresh of the National Meteorological Library. This has included the creation of a quiet working zone, and a more distinct display area. This piece of work has required the move of a significant quantity of material to the archive and at the same time the archive team have taken the opportunity to rationalise some duplicated collections. One result of this was the opportunity to offer a complete series of *British Rainfall* to the Royal Meteorological Society. It is hoped that this significant series will be of use and interest to all members and especially to members of the History Group but access is not limited to Reading and Exeter as the complete series is available from our Digital Library and Archive.

We have continued our digitisation activities and hope to complete the planned scanning of the Ten Year Rainfall series to 1960 by the end of the FY. Once complete this valuable data series will be uploaded to our digital library and archive. The rainfall data adds significantly to that already available to researchers and will certainly be heavily used.

Work to catalogue and move the archive in Scotland has also progressed apace. The project to QC the early climatological returns (Red Books) is nearing its conclusion and it is expected that it will be completed this year. The original documents will then be catalogued and transferred to National Records of Scotland and the digitised scans, which will become the primary means of access, will be made available via our Digital Library and Archive. These early climate records for Scotland are an important data resource and are well worth the time and care that has been spent on ensuring their accessibility and long term preservation. Within the wider cataloguing and transfer process tabulated data has now been completed ready for uplift and all autographic record types have been test catalogued with thermograms completed. Current projects involve the sorting and cataloguing of the modern daily and hourly climate forms and ongoing cataloguing of the many thousands of anemogram rolls.

Our ongoing collaborative work with related heritage institutions continues to bear fruit. At the end of November the August 1940 Biggin Hill Daily Register went on show at the new

Biggin Hill museum as a long term loan exhibit. This will be a fitting location for the register which holds the observations taken by the three Met Office observers who lost their lives during the air raid on the evening of 30th August 1940. We have also initiated contact with the Royal Society archives; they are keen to hold a joint exhibition in 2019. Planning is in its early stages but the aim is to cover a range of key themes including Weather Lore, the foundation of the Met Office, Citizen Science, Climate Change and Super-computing. We hope to be able to

include items from both the Met Office and Royal Meteorological Society archives in the displays and are excited by this rare opportunity for a temporary foothold in London. We will keep RMetS and the History Group appraised as plans progress.

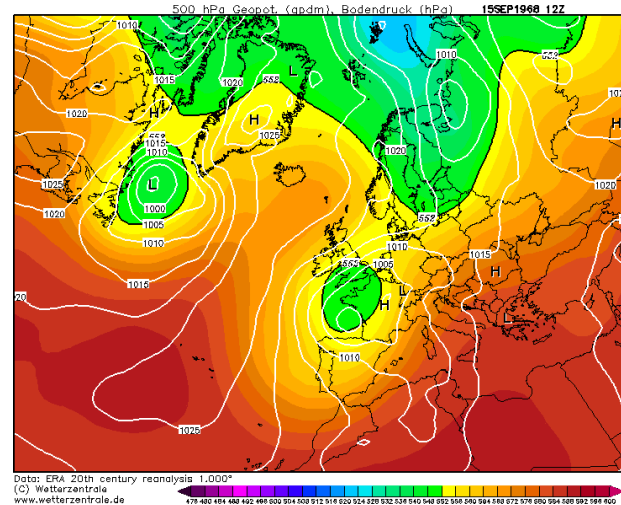
*Dr Catherine Ross, Archivist
Met Office National Meteorological Archive*

Remembering a local weather disaster from 50 years ago

On a chilly November night, over 200 members of the Molesey Local History Society in Surrey gathered to remember the flood of 15 – 16 September 1968. The Society had put together a range of speakers covering the causes of the flooding and several members reported on their personal experiences of the event, mostly as school-children. A large exhibition of photographs and archival items was displayed and actors recreated the memories of numerous local people who had contributed stories. The evening demonstrated that the event was still remembered vividly. This is hardly surprising as most of the town was flooded by flood-waters from the River Mole.

The purpose of this note is simply to record the degree to which collaboration can yield a variety of new insights and memories even half-a-century after a major weather event and to gather evidence of its impacts before archival evidence is lost. However, in passing, the main events of the event can be outlined as follows. A slow-moving occluding depression over Biscay spread occluding fronts slowly north across southern England. They become stationary on 14 September as a surface NE flow became established over southern Britain. This flow became destabilised by the development and south-eastward movement of an upper cold pool. At the same time, the instability of the

surface flow was augmented by its passage over the warm waters of the Thames Estuary.



Surface flow and 500hPa geopotential heights at 12Z, 15 September 1968 (Source: ERA reanalysis www.wetterzentrale.de).

Rainfall totals over 48-hours reached 150mm in parts of the Mole and Medway catchments to the south of London. Locally, over 200mm fell in south Essex around Tilbury. The severest flooding occurred in Guildford from the Wey, in Tonbridge from the Medway and in Molesey from the Mole.

The flooding in the town did not develop until Monday 16th by which time the rain had moved away. The key was the formation of a lake of

flood water upstream of the town which had formed as water cascaded under a series of railway bridges. The flatness of the town meant that flood waters covered much of Molesey, leading to the AA creating a road-sign warning motorists that East and West Molesey were 'closed'.

The History Society has now created an archive that will be used in a forthcoming exhibition. After a first meeting held on the 40th anniversary, a third meeting is planned for next year focussing on the flood prevention scheme that followed. It is hoped that a book will follow.

A brief note on the weather of 1968

1968 seems to have been a notable year for extreme weather in the UK. It was one of the more blocked years of the 20th century. There was a small latitudinal pressure gradient around the UK and there were just 64 days with the Lamb W airflow type. Pressure anomalies for the year ranged from -1.0mbar in Kent to above +2.0 in northern Scotland. Low pressure close to south-eastern parts of the country gave an unsettled summer here in contrast to fine conditions over north-west Britain.

It was also a year of outstanding individual weather events. These include the Glasgow storm of 14-15 January (Tranter and Galvin, 2018), the heavy orographic rains of 26-27

Book Announcement

Macdonald, L. (2018) *Kew Observatory and the evolution of Victorian science*. University of Pittsburgh Press. Pp. 308. ISBN 13: 978-0-8229-4526-0

Based on the author's PhD thesis, this book covers the social and cultural development of the observatory in the context of the prevailing political environment through the 19th century. A review will appear shortly in the *Climatological Observers Link Bulletin*.

March in western Scotland, the hailstorm of 1 July, the rainstorms of central and western England on 10-11 July and, of course, the South East England rains and floods of 14-15 September (Jackson, 1977). See Bleasdale (1974) for further discussion of each event and for maps of the distribution of rainfall).

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Jackson, M. (1977) Mesoscale and synoptic scale emotions as revealed by hourly rainfall maps of an outstanding rainfall event: 14-16 September 1968, *Weather*, **32**, 2-16.

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The article by Bleasdale is the very last item to appear in the last volume of *British Rainfall* to be produced.

Julian Mayes

History Group - Special Interest Group of the RMets.

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