The following pages contain the results of online research into the historical climate and weather recording in Long Eaton and the surrounding areas, conducted by David Gell.

The initial pages (2 - 9) in the pdf are from Cambridge County Geographies - Nottinghamshire (H. H. Swinnerton. Cambridge University Press 1910).

Mellish’s Rainfall Distribution map (30 year period) on page 7 of this pdf shows Trent College, Long Eaton as a weather recording station. It is not clear from the text as to the specific years the period covered, however further research led to the discovery of an article by Henry Mellish, F.R.Met.Soc. published in the Quarterly Journal of the Meteorological Society, volume 19, Issue 85, pages 45-57, January 1893. A 30 year period (1861-90) is the subject of his paper, and it is therefore assumed that Mellish’s map in Swinnerton is part of that study.

Trent College did not open its doors to pupils until April 1868 (source Wikipedia), so their rainfall records would not have covered the full period 1861-1890. Mellish does state however that calculations were made using mean ratios compared to nearby stations, in cases where records did not cover the full period.

Separate research has also been conducted by David Gell into the former Lowe family observatories at nearby Beeston/Lenton, from which weather recordings were also made.

It is not known if any of the original (or even later) weather records taken at Trent College, Long Eaton are still in existence, but there is a possibility that they may be held in at the Nottingham University Manuscripts and Special Collections, Kings Meadow Campus, Nottingham (further details below).

Neither is it known if any historic local weather records are held at Trent College, so that would be another line of enquiry for anyone interested in taking this research further.
10. Climate and Rainfall.

The average weather of any place is called its climate. This depends primarily upon its latitude. But places upon the same latitude may have different climates owing chiefly to the proximity of the sea. Other less important factors are the direction and strength of the winds, the amount of sunshine, the temperature, and the rainfall.

Most of our weather comes to us from the Atlantic. It would be impossible here within the limits of a short chapter to discuss fully the causes which affect or control weather changes. It must suffice to say that the conditions are in the main either cyclonic or anticyclonic, which terms may be best explained, perhaps, by comparing the air currents to a stream of water. In a stream a chain of eddies may often be seen fringing the more steadily-moving central water. Regarding the general northeasterly moving air from the Atlantic as such a stream, a chain of eddies may be developed in a belt parallel with its general direction. This belt of eddies, or cyclones as they are termed, tends to shift its position, sometimes passing over our islands, sometimes to the north or south of them, and it is to this shifting that most of our weather changes are due. Cyclonic conditions are associated with a greater or less amount of atmospheric disturbance; anticyclonic with calms.

The Royal Meteorological Society receives reports of the temperature of the air, the hours of sunshine, the rainfall, and the direction and force of the wind from all parts
ENGLAND & WALES
ANNUAL RAINFALL
Statute Miles

(The figures give the approximate annual rainfall in inches.)
of our islands, and publishes a daily report with a map, which may be seen in almost any newspaper. We can at a glance learn what has happened in other parts of England during the last twenty-four hours. At the end of the year these results are all brought together and averaged, and we can compare this average climate of the different British areas.

In Nottinghamshire there are several stations, well equipped, where records have been kept for many years.

Of all the observations made upon the wind at Hodsock Priory during the thirty years 1876–1905, one-third showed the wind coming from the south-west and west; nearly as many indicated calms; the rest indicated winds coming from other quarters. The prevailing winds of our county, therefore, as of England generally, are from the south-west or west. The latter are most frequent in July, the former in December. Easterly winds are commonest in March.

In 1908, only 1228 hours of bright sunshine were recorded at Hodsock. This was less than the average for twenty-five years, viz. 1252. In the same year the sunniest month was May, with 170 hours of sunshine. The dullest was December, with only 30 hours. Thus the range was from 35 per cent. to 13 per cent. of the time the sun was above the horizon. These figures are approximately true for the rest of the county, which thus compares unfavourably with the south coast of England and some parts of the eastern counties seaboard. On the other hand it is better off than some of the uplands of Derbyshire and Yorkshire, which have an average of less than 1200
hours sunshine in the year, or than many great cities such as Manchester, where in 1907 only 894 hours were recorded.

On May 20th, 1909, the highest temperature reached in Nottingham was 66° Fahr.; the lowest was 40°. These observations exhibit a range of no less than 26° Fahr. within twenty-four hours. In the Scilly Isles on the same day the range was only 9°, i.e. from a maximum of 59° to a minimum of 50°. This difference between the two places is due to the fact that Nottingham is surrounded on all sides by land, the Scilly Isles by water.

It is well known that if the sun shines with equal strength on land and water, the former becomes heated more rapidly and to a higher temperature than the latter, while, after the sun has set, if the sky is clear, the heat radiates away from the land more rapidly than from the water. These two influences, sunshine and radiation, are most effective in the summer time. In July at Nottingham the average maximum temperature is 70° Fahr., at the Scilly Isles 64°.

Both influences affect the temperature in the winter also, but then the moisture-laden winds from the Atlantic play a more prominent part. They prevent the temperature from sinking as low as it might otherwise do. Here again the west has the advantage, for whilst Nottingham has an average minimum in January of 31° Fahr., the Scilly Isles have 42°. Thus at Nottingham the annual range is 39° Fahr., while that for the Scilly Isles is only 22°.

These facts illustrate the differences between a “con-
tinental climate” and an “insular climate.” The latter is characterised by equableness and dampness, the former by cold winters and unusually warm summers. As compared with the climate of the Scilly Isles that of Nottinghamshire is continental. As compared with that of places of the same latitude in central and eastern Europe it is, in common with the climate of the whole of the British Isles, insular. The average temperature of our country is much higher than its latitude would lead us to expect. This is due to the fact that the prevalent south-westerly winds not only come from warmer regions themselves but also cause that drift of warm surface waters of the Atlantic to our shores commonly called the Gulf Stream. These combine to produce our mild winters.

The amount of rainfall varies considerably from day to day. In 1908 in Nottingham there were 182 days on which it was less than one-hundredth of an inch. The heaviest rainfall, over six-tenths of an inch, was on the 25th of March. The total fall for the year was 22.7 inches, which is equivalent to a downpour of 25,086,152 tons of water upon the city.

The average rainfall during the last forty-two years has been 24.9 inches. During that period the wettest year was 1872 with a fall of nearly 36 inches, and the driest year 1887, with less than 16 inches.

The accompanying map, prepared by Mr Mellish of Hodsock, shows the average distribution of rainfall in this county for a period of thirty years. From this it will be seen that the rainiest district is the high ground west of
Map showing Distribution of Rainfall in Nottinghamshire and neighbouring Counties
CLIMATE AND RAINFALL

Robin Hood's Hills. It is interesting to note that this supplies the sources of many of the largest streams in the county. The driest district is the lowest ground in the extreme north of the county.

From the general rainfall map of England it will be seen that this county is much drier than counties of the same latitude west of the Pennines. Much rain comes with the cyclones from off the Atlantic. As the air laden with moisture from its passage over the ocean is forced up by the Pennines it expands and cools and consequently discharges much of its moisture there. Passing over the hills the air then descends to the low ground, including Nottinghamshire, on the east. The reverse now happens. The greater part of this county is therefore in the rain-shadow of the Pennines.

What these are to our county the moorland of Devon and Cornwall, the Welsh mountains, or the fells of Cumberland and Westmorland are to the rest of England. This accounts for the fact, well shown on the map, that the heaviest rainfall is in the west, and that it decreases steadily until the least fall is reached on our eastern shores. Thus in 1906, the maximum rainfall for the year occurred at Glaslyn in the Snowdon district, where 205 inches of rain fell; and the lowest was at Boyton in Suffolk, with a record of just under 20 inches. These western highlands, therefore, may not inaptly be compared to an umbrella, sheltering the country further eastward from the rain.

The rainiest month in the year is October, though July and August run it very close. In fact our county is
characterised by its summer rains, as about 10 inches out of the annual 25 fall during the months of May, June, July, and August.

The climate of Nottinghamshire may be briefly summarised in the following terms:—the prevailing winds are westerly and south-westerly, the amount of sunshine is moderate, the temperatures comparatively extreme, and the rainfall low with a large fall in the summer. It must be remembered, however, that strictly local factors may exist. An open country or a sheltering range of hills, a southerly or a northerly aspect, a sandy or a cold clay soil will produce striking differences in the climate of places distant only a few miles one from the other.

II. People—Origin, Race, Population.

In the chapter on Natural History it was seen that the animals and plants of Britain came originally from the Continent. The same is true of its people.

How long man has existed on the earth no one can say. No even approximate guess can be hazarded, and it is not likely that our lack of knowledge in this respect will ever be enlightened. But from recent researches in Crete it seems reasonable to suppose that a high state of civilisation was in existence there, and no doubt in other parts of the Mediterranean basin, perhaps as much as, or even more than, 10,000 years ago. This civilisation never reached our shores, but in times far more remote than these man was existent in Britain. Almost all traces of him, save of the implements he made—chipped flints for hunting and
RAINFALL OF NOTTINGHAMSHIRE, 1861-90
by Henry Mellish, F.R.Met.Soc.

[Received November 1st.–Read December 21st, 1892.]

In the following paper I have attempted to discuss the rainfall of Nottinghamshire during the 30 years 1861-90. It is almost needless to state that nearly the whole of the figures are derived from British Rainfall and other publications of Mr. Symons, and I am also indebted to several observers who have been kind enough to furnish further particulars. In addition to the stations actually within the County I have included a considerable number in adjoining Counties, nearly the whole of which are within about 10 miles of the County boundary.

MEAN ANNUAL RAINFALL

The first point I propose to consider is the mean annual rainfall in different parts of the district. For this purpose the returns have been utilised for all stations for which the record extends over at least 10 years (in a few cases returns of nine years have been used). About 65 stations are available, and the returns have all been reduced to the average of the 30 years 1861-90 by determining the ratio which the mean annual rainfall for the years of observations at each station bore to the mean of the corresponding years out of the 30 years at the nearest station or stations for which the returns were complete for the whole period. Thus the mean rainfall at Hodsock for the 15 years 1876-90 is 25.98 ins.; by calculating the mean ratio of the fall for these 15 years to the fall for the 30 years at Tickhill, Worksop, and Retford, three stations nearly equidistant, for which the returns are complete, and reducing 25.98 ins. in the same proportion, we get 24.54 ins. as the calculated average for the 30 years. Other stations have been treated in a similar way.

In most cases the rain gauge appears to have been kept in the same situation throughout the period, but in a few instances the records of two different gauges kept at different portions of the period have been combined, and in a few others the observer seems to have moved to a different house in the same neighbourhood. Thus the mean adopted for Beeston is formed of 20 years’ observations at Highfield House, by Mr. Lowe, and 10 years at Beeston Fields, by Mr. Fellows*. Separate records have been combined in a similar way at Derby, Waltham, Thoresby, and perhaps at Branston; while in the case of Nottingham and both records at Belper the observers appear to have moved during the period; at Nottingham more than once. No doubt these combined records are not nearly so satisfactory as an unbroken return from one station, but under the circumstances it seemed the best way of dealing with the observations for this enquiry.

[* E. J. Lowe relocated to Chepstow in 1882, so may have persuaded George? Fellows of Beeston Fields to succeed him as the meteorological recorder for Beeston. From Mellish's comments above, the Beeston area rainfall records used by him would have been provided by Lowe for the period 1861-80 and by Fellows for the period 1881-90. Could E. J. Lowe have offered/sold some or all of his observatory instruments to George Fellows, prior to Lowe’s departure to Chepstow, or was Fellows already making weather records independently?]
Fellows of Beeston Fields

GEORGE FELLOWS of Beeston Fields, J.P. for the County of Nottingham; born at Beeston 29 March 1845; educated at Repton; Captain and Hon. Major South Nottinghamshire Yeomanry Cavalry 1876-1895; formerly partner in the firm of Hart & Co., bankers, Nottingham, of which city he was appointed Treasurer in 1874; married at St. Peter's, Eaton Square, London, 7 Feb. 1877, Emma Margaret, eldest daughter of the Rev. Richard Thomas Pulteney, rector of Ashley, Market Harborough. Children:–

i. Evelyn Emma
ii. Frances Dorothy.
iii. Violet.
iv. JOHN PULTENNEY FELLOWS, born at Beeston Fields, 28 March 1881; educated at Repton.
v. RICHARD WOODHOUSE FELLOWS, born at Beeston Field, 13 April 1887; educated at Marlborough.
vi. Sylvia Bettina.
vi. Margaret Geraldine.
ix. Gwendoline Mary, died aged two days.

RESIDENCE: Beeston Fields, Nottingham.

From the nottshistory.org website;

THE FELLOWS FAMILY has long been prominent, and although it is now a departed name in Beeston, yet it is perpetuated in the Church adornment by Mr. C. T. Fellows, and memorials of other members of the family. Mr. Samuel Fellows was Sheriff, Alderman and Coroner of Nottingham, and was Mayor (1755). Mr. John Fellows held the same offices (except the Coronership) being Mayor 1775 and 1782. His son John held the same offices, being Mayor in 1790. He founded the Bank in 1808, and a copper taken was found in perfect condition in 1915, when the "Star Inn" was demolished, Nottingham Castle being inscribed on one side, and "one penny token, 1812," and on the obverse "Payable by J. M. Fellows, Pound Note for 240." It belongs to Mr. J. J. Bywater. Mr. Alfred T. Fellows was Sheriff 1817, as was James in 1824. John, who died in 1873, was J.P., and in the South Notts. Yeomanry. Of Susannah Fellows, who died in 1845, it is testified that "her piety and benevolence endeared her to all who knew her, and those who knew her best admired her most," Mr. Alfred T. Fellows built "Beeston Fields," having the bricks burnt on the spot, and Mr. Geo. Fellows, J.P., before he sold "Beeston Fields" (now the property of Mr. Harold Bowden) was Hon. Major in the South Notts. Yeomanry, of which regiment he in 1895 published a history. Another book by him is Arms, Armour and Alabaster round Nottingham.
The following references were taken from;

A NOTTINGHAMSHIRE BIBLIOGRAPHY: PUBLICATIONS ON NOTTINGHAMSHIRE HISTORY BEFORE 1998 By Michael Brook

THE THOROTON SOCIETY OF NOTTINGHAMSHIRE
in association with
THE NOTTINGHAM CIVIC SOCIETY
2002

CLIMATE


GENERAL HISTORY AND BIOGRAPHY

4700. `The Beeston Observatory', Beeston Heritage, no. 9 (1993), 7-8. `Reprinted from an old anonymous article'.


4749. Sumner, W. L. `The Beeston Observatory [of E. J. Lowe]', Survey, Nottingham, 12, 3 (1962), 5-12, ill.
Biography of Colonel Henry Mellish (1856-1927)

Henry was the son of William Leigh Mellish, and succeeded his father to the Hodsock Priory estate in 1864. He was educated at Eton and at Balliol College, Oxford, gaining a First in Natural Science in 1879.

He was called to the Bar at the Inner Temple in 1882, but never practised as a lawyer. He had a distinguished career in local government, serving as a Councillor and Alderman of Nottinghamshire County Council from 1889 to his death, a magistrate, and a member of Worksop Rural District Council. He was chairman of the Quarter Sessions for Retford division, and chairman of Nottinghamshire Education Committee for 23 years. He was also a member of the Council of University College, Nottingham, and of the Court of Governors of the University of Sheffield.

He was a member of the Nottinghamshire Volunteers and Territorial Force from 1876 to 1912, chairing the Nottinghamshire Territorial Association and attaining the rank of Lieutenant-Colonel. He was Commander of the 4th Volunteer Battalion Sherwood Foresters from 1901 to 1905.

He enjoyed competitive rifle shooting and was a Councillor of the National Rifle Association. He built his own rifle range at Hodsock Priory, and won prizes at the Wimbledon and Bisley competitions. He was also part of the English team shooting for the Elcho Shield for many years.

Henry’s other main interest was as an enthusiastic amateur meteorologist. He was elected as a Fellow of the Meteorological Society (later the Royal Meteorological Society), was on its Council from 1902-26, and served as its President from 1909-1911. He maintained a recording station at Hodsock from 1875 to about 1925 and sent weekly reports to the Meteorological Office. A number of articles by him were published in the Quarterly Journal of the Royal Meteorological Society.

As he died without heirs, Hodsock Priory passed to the Buchanan family, descendents of his grandfather Edward Mellish, Dean of Hereford.

Family

He was unmarried.

Archive Collections

- Papers relating to Colonel Henry Mellish are part of the Mellish Collection held in Manuscripts and Special Collections at the University of Nottingham
Colonel Henry Mellish’s meteorological readings are part of a collection of Meteorological Records for Nottinghamshire, 1841-1981, held in Manuscripts and Special Collections at the University of Nottingham.

The Mellish Meteorological Collection of monographs and periodicals collected by Colonel Henry Mellish is a named Special Collection at Nottingham University Library.

Published Works

- H. Mellish, 'The Weather of 1925 at Hodsock Priory, Worksop, With Tables for the 50 Years 1876 to 1925' [Hodsock, privately published, 1926?]

Contact:

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For Further Investigation

1. Any data/references to the rainfall records for Trent College, and Beeston (E. J. Lowe and G. Fellows), used in the report on Rainfall of Nottinghamshire, 1861-90, by Henry Mellish [Possibly included in the above article, or in the Met (a collection of Meteorological Records for Nottinghamshire, 1841 - 1981) held at Manuscripts and Special Collections, King’s Meadow Campus, Nottingham (Meteorological collection Pamphlet QC925.4.G72.N68 MEL)].

2. For Long Eaton/ Trent College/ Beeston references, also check *Nottingham for the Past twelve years (1867 - 1878 inclusive)*, from dinural observations by M. Ogle Tarbotton: to which was added rainfall tables from several localities on the Trent watershed (Meteorological Collection QC989.G72.N68 TAR).

3. Any information on what happened to E. J. Lowe’s meteorological/astronomy instruments when he left Beeston.

4. Investigate the two photographs of the observatory of J. H. Lowe at Beston, Nottingham, mentioned in the scope and content of the Met collection at Manuscripts and Special Collections, King’s Meadow Campus (photocopies/scans if possible).

5. Anything else on George Fellows of Beeston in terms of meteorological/astronomy observations/recording.

6. Does Henry Lawson’s pamphlet (dated 1845) *Observations on the placing of thermometers...* (Collection Pamphlet QC912 LAW) contain any illustrations/plans relating to the construction of the stand? If so, a photocopy of the drawings would be useful (I already have the text).