



Weather Front.

August 2022/1922

August 2022

Observers Notes.

Derby: This was the warmest August on record (since 1952), beating 19.4 C in 1995 and 1997. It was also the first August to have four 30+ maxima since 1995, also four.

Middleton: This was the warmest August since 1997, and the mean maximum was the highest since 1995. The maximum temperature on the 14th was the highest for the month since 1990. It was the driest August since 2003, and the sunniest since 1995.

Mickleover: It was the driest August since 2003, and the second driest since 1995. It was also the warmest August since 1995 (19.7 C), the second warmest on the station record and, locally, since 1952. There were five consecutive days with maxima above 31 C.

Lowdham: There were 231.1 hours of sunshine (135% of 1990-20 average) recorded at Radcliffe-on-Trent (T Scholey).ⁱ

Mountsorrel: August was the warmest, driest, and sunniest month on the station's twenty-year record.

Coton-in-the-Elms: This was a hot August; the warmest since 1997. The mean maximum temperature was the warmest for August since 1995 however, nights were often cooler.

Bablake: This was the warmest August since 1997 (19.8 C); only 1995 and 1997 have been warmer since 1892. This was the driest, and sunniest August since 1995.

Ely: The mean maximum temperature was the highest on the fifty-year station record however, the mean temperature was the highest since 1997. 20.7 mm of rain fell in about ten hours over the 24th/25th; this was 83% of the monthly total.

Pitsford: Like July, mostly dry, warm, and sunny, culminating in another heatwave and drought in the second week. Thereafter, turning more unsettled.ⁱⁱ

Weather impactsⁱⁱⁱ

Atlantic weather fronts brought high rainfall totals to parts of North Wales, Cumbria and the West Highlands on the 1st and 2nd. The Conwy River in North Wales overtopped, leading to subsequent flooding in and around the town of Llanrwst on the 2nd. An extended fine spell followed, with temperatures eventually rising into the low to mid 30s °C in parts of England and Wales, this hot spell being less extreme but of longer duration than July's, with a four-day-long amber extreme heat warning issued. On the 6th and 7th, wildfires were reported at several locations around London and south-east England including Woolwich, Feltham, and Newbury Park. Further north both Nottinghamshire and Northamptonshire Fire and Rescue Services reported wildfire activity on the 12th and 13th. The London Ambulance Service saw a steep rise in heat-related calls by the 13th. The hot spell broke down mid-month, with thunderstorms developing first across Scotland and Northern Ireland and then in parts of England. Torrential rain in Fife on the 14th led to flooding, and disruption to both roads and railways, whilst in Inverness the roof of a Tesco store partially collapsed due to heavy rain and the store was evacuated. On the 15th Truro (Cornwall) was hit by thunderstorms, with flash flooding on some roads. Then on the 16th locally severe thunderstorms affected parts of South Wales and the East Midlands, with road and property flooding in Worksop (Nottinghamshire) and Market Rasen (Lincolnshire). In Wales surface water flooding arose in Port Talbot and Swansea, with at least one shop roof leaking badly during torrential rain. On the 17th it was the turn of southern England to experience surface water flooding, with numerous roads in Greater London awash and several tube stations closed after torrential downpours. In Totton (Hampshire) the sewage pumping station was overwhelmed because of torrential rain. After a quieter spell, thunderstorms and torrential downpours developed in a belt from Hampshire through London into Norfolk and Suffolk on the 24th. Surface water flooding caused further tube station closures and travel disruption in London. Bury St Edmunds reported multiple incidents of property flooding, as well as the closure of a Sainsbury's supermarket due to water inundation.

August 1922

Observers Notes.

Hodsock Priory (Nottingham): The month was cool and rather showery with an absence of warm weather.

Tenbury (Worcester): Showery, cold, and sunless.

Alfreton (Sussex): A cold, wet month.

Torquay (Devonshire): The climatic conditions during the past month were again disappointing. Heavy cloud, a rather low temperature, intermittent rain, and absence of long periods of sunshine were the main characteristics.

Cargen (Kirkcudbright): A dull, damp, disappointing month.

Dublin: The chief, and outstanding characteristics of August were its clouded skies, lack of sunshine, and resulting absence of summer warmth by day.

Carrigoran (Co. Clare): We have had an exceedingly gloomy, cold, wet month.

Derby/Burton-on-Trent: August 1922 was a very cool and wet month; the complete opposite of August 2022! Most of the rainfall sites recorded 120-130 mm, roughly twice the average for the month. One site in Burton had the equivalent of 161 mm. The 2nd was a very wet day with amounts around 50 mm. Suppressed temperatures prevailed throughout August 1922. Few days reached, or exceeded, 20 C. The highest values were between 22 C and 24 C on the 20th/21st. Many nights had minima below 10 C, with minima around 4 or 5 C on the 10th, 15th, 20th, and 26th. The overall mean was around 13.5 C. August 1922 was near to 2 C cooler than the, then, 30-year average. ^{iv}

Overview of August 1922.^v

The cool, and unsettled, weather, which had prevailed from the middle of June, continued throughout much of August. Temperatures were below average, and maxima above [21 C] were rare. Rainfall was well above average over most of England and Wales, but below average in Scotland.

At the beginning of the month a depression was located between Iceland and the Faroe Islands, with an extensive anticyclone extending from the Azores to France. There were local disturbances on the 1st which produced heavy rain and thunderstorms in Switzerland, Berne recording 46 mm of rain in 24 hours.

The Icelandic depression moved north-east producing squally, showery weather over the British Isles. The Azores high also moved east and, by the morning of the 2nd, covered the southern half of England. By the 4th it lay over Central Europe and pressure had risen over Iceland, resulting in Atlantic depressions taking a more southerly track. Pressure falls in western Iceland heralded another depression which, on the evening of the 2nd, was positioned in the approaches to the English Channel and, on the 3rd and 4th, produced unsettled weather over the country. By the morning of the 5th the depression had almost filled but, on the morning of the 6th, another depression had appeared in a similar position and moved north-east across England. A second centre appeared off the south-west coast, also moved north-east, and joined the first depression over the North Sea. These disturbances produced thunderstorms and very heavy rain in England, particularly in the Midlands and the North, where extensive floods caused much damage. More than 50 mm fell on the 6th, in a strip from Swanage to Worksop, and, on the 7th, in South Yorkshire. Between 0001 and 1600 on August 7th, 99 mm fell at Sheffield. At Strelley Hall,

Nottinghamshire, 82 mm fell in 21 hours, and at Harrogate 123 mm fell in three days. At Hodsock Priory, Worksop, 125 mm fell between 2300 on the 6th and 0300 on the 8th, including 50 mm between 0900 and 1100 on the 7th. At Brocklesby [33.3 mm] was recorded at 0900, at Fulbeck (Lincolnshire) 45 mm, at Skegness 8 mm, Lincoln 28 mm, Nottingham 53 mm, and at Belvoir Castle 92 mm, all on the 6th or 7th.

A ridge of high pressure slowly built over the country as the depressions moved east and, by the 11th, the ridge extended from the Azores to Spitzbergen, splitting into two centres of high pressure, one over Spitzbergen, the other over the Azores. Some low temperatures were recorded at this time, significantly [-1 C] at Balmoral on the 12th.

On the 13th a new depression developed in the vicinity of Iceland and tracked east on the 13th, remaining clear of the northern parts of the British Isles. The general synoptic situation continued for several days and maintained, generally, unsettled weather over north-west Europe. There were some heavy falls of rain in Scotland, reaching 41 mm at Ardgour on the 15th while, in Germany Frankfurt recorded 71 mm in 24 hours on the 14th. This from a shallow depression over France, which moved east producing local heavy rain and thunderstorms.

On the 19th the anticyclone, centred off the south-west coast of Britain, moved north-east and produced warmer weather. Maxima of [21 C] were exceeded at many stations, some in eastern Scotland, [23 C] at Aberdeen and [24 C] at Logie (Fife). On the 20th temperatures fell over Scotland but continued high over eastern and southern England. The warmest temperatures of the month were recorded around this date, [24 C] at Southend on the 20th, and [25C] at Jersey and [26 C] at Greenwich on the 26th. [NB. This latter temperature was recorded in a Glaisher Stand]. Similarly, on the 21st a maximum of [38 C] was recorded at Bayonne.

On the 22nd a depression moved south-east from Iceland and, by the 23rd, was situated over Denmark. This produced a renewal of very unsettled weather over west and north-west Europe; the north-westerly winds introducing much lower temperatures. The depression filled and moved north, but further depressions moved in from the Atlantic and, by the 28th, a trough had developed extending from Iceland to Spain, producing unsettled conditions, which continued to the end of the month. On the 30th a small secondary produced 79 mm of rain at Berne.

Temperatures everywhere were below average. Maxima exceeding [21 C] were rare, and very few exceeded [24 C]. The MWR noted that Scotland had only once (in 1912) experienced an appreciably colder August in the preceding sixty years.

The distribution of rainfall, which was governed by the heavy rains of the 6th and 7th, was irregular. The greatest amounts, which exceeded 100 mm and reached 150 mm in places, fell in a belt from Cornwall to Cumberland and through the Midlands. Rainfall was also

above average, locally, in central and southern Ireland but, in eastern England and in Scotland, rainfall was below average. Less than 50 mm fell in East Anglia and the Fens, and less than 25 mm in Essex. Less than 50 mm fell around the Firth of Forth and Moray Firth, while in parts of Perthshire, the Lothians, and the Tay Valley less than 50% of average was recorded. In western and northern Scotland rainfall was generally less than 150 mm, the average being exceeded in only a few isolated places.

All in all, a Dull, Cool, And unsettled month.

Europe and the Rest of the World.

A violent thunderstorm was reported in the vicinity of Lyon, on the 7th, and much of the town lost electric power due to the destruction of the local power station. Nearly all the local factories depended on the site for power and lighting, hundreds of workers therefore lost their jobs.

Around the middle of the month, southern France experienced a period of very hot weather, the shade temperature reaching [37 C] at Toulon. Many forest fires broke out and thousands of acres of woodland were destroyed. Violent hailstorms were also reported between the 14th and 16th in the Meuse and Saone-et Loire Departments during which cattle were killed and large trees uprooted.

Very hot weather was recorded in Italy during the second week of August, associated with an anticyclone over Central and Eastern Europe. The temperature in Rome and in the Umbrian Hills exceeded [38 C], and, on the 12th [44 C] was recorded at Foggia, near Bari, on the Adriatic coast; this was the highest temperature recorded in Italy in the previous fifty years. Exceptional heat was also felt in other parts of the Mediterranean with forest fires breaking out in southern France, Algeria, Sardinia, and Greece.

There was a break in the Indian Monsoon with the first half of the month being almost rainless in Central and north-west India and the northern Deccan. However, some parts had average, and even above average, rainfall, the latter being mainly on the Madras coast, Bengal, and Burma [Myanmar]. Extensive flooding was reported from Rangoon on the 9th and, on the 14th, one hundred square miles of the Midnapore district of Bengal were inundated. Heavy rain also fell in Waziristan (eastern Afghanistan).

A typhoon hit Swatow, on the Han River delta in southern China, on the 2nd. The loss of life was estimated to be at least 50,000. It is understood that there were two typhoons, the second being more severe and accompanied by thunder, torrential rain, and a large tidal wave, which devastated the area. All shipping was wrecked, and one motorboat was found five miles inland. Apart from the severity it was the early date, which was more noticeable, the season did not usually begin on that part of the coast until the end of August.

Hot weather was being experienced in Japan and in the hinterland of China during July and was continuing during August. Maxima frequently exceeded [38 C] and, on several occasions, reached [46 C] in Tientsin and Peking. It was during a typhoon, on the 26th, that the Japanese cruiser Nitaka sank off the Kamchatka coast.

Transatlantic shipping was reporting frequent icebergs in the North Atlantic and the liner Antonia was delayed by eighteen hours by fog off Newfoundland.

The weather continued favourable for the Canadian harvest, which was expected to exceed that of 1915. Even the Manitoba section, which had suffered badly from the June hail, had recovered. It was also reported that "satisfactory rain" had fallen in British Columbia during the month.

The United States Weather Bureau reported on the 9th that the drought was continuing in the western section of the cotton belt, "with intensely hot weather in Oklahoma"; light rain prevailed over most of the central and eastern section.

Heavy rain was reported on the 4th, in Southern Chile causing extensive flooding and great damage to property and agriculture.^{vi}

Central England Data.^{vii} (Averaging period is 1891 to 1920.)

Mean Maximum Temperature: 17.2 C. Average: 20.1 C.

Mean Minimum Temperature: 10.0 C. Average: 11.3 C.

Mean Temperature: 13.6 C. Average: 15.4 C.

England and Wales Rainfall: 100.3 mm. Average: 89.6 mm. (112%)

Midlands Data. (Averaging period is 1911 to 1920).

Midlands Mean Maximum Temperature: 17.0 C. Average: 19.8 C.

Midlands Mean Minimum Temperature: 8.7 C. Average: 10.4 C.

Midlands Mean Temperature: 12.8 C. Average: 15.1 C.

Midlands Rainfall: 118.4 mm. Average: 75.3 mm. (157%.)

2022 (Provisional)

Central England (Averaging period is 1991-2020).

Mean Maximum Temperature: 24.1 C. Average: 20.9 C.

Mean Minimum Temperature: 13.3 C. Average: 12.1 C.

Mean Temperature: 18.7 C. Average: 16.5 C.

England and Wales Rainfall: 37.5 mm. Average: 82.3 mm. (46%)

ⁱ J Osborne, by email, 6 September 2022.

ⁱⁱ Pitsford Monthly Weather Report, August 2022, Pitsford Weather Centre, September 2022, p. 3.

ⁱⁱⁱ Monthly Weather Report, August 2022, Meteorological Office, September 2022, HMSO, p. 1-2.

^{iv} D J Stanier, by email, 2 September 2022.

^v Monthly Weather Report, August 1922, Meteorological Office, HMSO, October 1922, p.100, and Meteorological Magazine, September 1922, Meteorological Office, HMSO, October 1922, pp. 223-230.

^{vi} Meteorological Magazine, September 1922, Meteorological Office, HMSO, pp. 225-230.

^{vii} Hadley Centre, Central England and Midlands, Meteorological Office.