



Weather Front

March 2022/1922

March 2022

Observers Notes.

Bablake: This was the sixth sunniest March since 1895. The previous years were 1967, 1995, 2003, 2009, and 2012.

Lowdham: There were 168.1 (144%) hours of sunshine at Radcliffe-on-Trent.ⁱ

Mickleover: This was the fifth warmest March on the station record (1981).

Middleton: March 2022 was the third warmest on the station record behind 2012 and 2017. The air pressure of 1044.6 mb, on the 18th, was the highest for March since records began in 1977. The only lying snow during the month was 1.5 cm at 9099 on the 31st.

Derby: The highest maximum of 18.6 C was one of five consecutive days at 18 C or more.

Pitsford: The first half [of the month was] unsettled and then becoming dry, warm, and sunny in the second half, culminating in a brief cold snap during the final few days, with snow flurries early on the 31st.

Ely: Generally mild but with a cold start and finish, and frequent ground frosts. Only 1.1 mm of rain fell after the 16th, this day recording the heaviest fall of the month, and the heaviest fall in March since 2008; it was also the heaviest fall on that day in 51 years. It was the fourth successive March with an almost dry second half. NE and SE winds predominated, the frequency of both being March records for the station.

Mountsorrel: The month was generally mild, but the end of the month brought a sudden drop in temperatures, with snow being recorded on the 31st, and a maximum temperature of just 6.2 C.

Coton-in-the-Elms: The month was characterised by warm days and cold nights. There were a number of frosty nights, especially later in the month, followed by warm clear days. Some days had a range of 20 C!

Weather impacts

As high pressure played a dominant role in the month's weather, impactful conditions were limited, with few warnings issued during the month and none of these being linked to rainfall. It was an especially dry month across NW Scotland, and the fine clear weather did ensure some chilly nights, especially over the northern half of Scotland. Only at the very end of March did an incursion of Arctic air bring a temporary return to wintry hazards. High temperatures, brisk winds, and low relative humidity between the 19th and 22nd probably contributed to localised wildfire outbreaks across Northern Ireland, parts of northern England and Wales. The cold air outbreak at the end of the month generated some localised snow accumulations, especially to the eastern half of the UK, and several road traffic collisions were reported from counties including Derbyshire, Lincolnshire, and Norfolk on the morning of the 31st. ⁱⁱ

From the Press, March 2022.

On the 1st, The Guardian noted that residents of Northern New South Wales, were clinging to rooftops as, "off the charts floods hit Australia". Unprecedented floods had inundated the town of Lismore.

On the 2nd a report of Argentinian wildfires had covered southern Paraguay in a colossal ash cloud.

On the 3rd, it was reported that Sydney residents, in New South Wales, had been told to leave their homes as the Warragamba Dam was spilling at a rate of over 15 bn gallons a day, after torrential rain had exceeded earlier forecasts. In contrast, the wet season of Northern Australia was well below average. A La Nina event, combined with Global Warming, is suggested as the main cause.

On the 17th, a report was noted that Tropical Cyclone Gombe had affected parts of Madagascar, Mozambique, and Malawi, during the previous week, bringing strong winds and torrential rain.

Again, on the 17th, there were reports of a late winter storm affecting eastern parts of the USA. Heavy rain, widespread heavy snow, strong winds, thunderstorms, and freezing temperatures were reported as far south as Alabama, Mississippi, and Georgia. Snow depths of 20-30 cm were noted across the Appalachians and northwards into Vermont.

On the 29th, a report noted that intense rainfall hit northern parts of New Zealand on the 21st, causing severe flooding in northern Auckland. The flooding was associated with thunderstorms, which produced 4,000 lightning flashes in an hour.

California has been hit by drought, with temperatures to the north of San Francisco reaching 32 C on the 22nd, beating the daily record set in 1926. It follows a long dry spell; Sacramento suffered a record of 66 consecutive days without measurable rain until the 15th. ⁱⁱⁱ

March 1922.

Observers Notes.

Ipswich (Suffolk): An unsettled month, with the exception of a few fine days between the 9th and 18th; on the whole it has been a fairly typical month for the time of year. All vegetation is extraordinarily backward.

Tenbury (Worcester): Cold stormy month. Run of easterly winds. Vegetation and trees completely checked right through the month.

Totland Bay (Isle of Wight): March 8th many trees uprooted and roofs damaged.

Redruth (Cornwall): Very severe gale early morning of 8th. Much damage done in many places.

Dublin: A cold comparatively dry month. The 31st stands out as probably the most severe day of the past winter. In the afternoon a veritable blizzard raged for some hours.

Derby/Burton-on-Trent: A little drier than normal at most sites, but there were two slightly wetter locations. Most gauges yielded 40-45 mm, but the wetter spots were 58-65 mm. Temperatures were rather below normal overall. The extreme minima were around -3 C on the 11th, 22nd, 23rd, and 26th, with maxima reaching 13-15 C on the 3rd and 4th. The overall mean was around 4.5 C. There were thirteen air frosts in Barton.^{iv}

Summary

8 March: cyclonic situation, severe gales; 19-22 March: northerly/anticyclonic situations, heavy snowfall in Scotland, Wales and west England, severe snowstorm-blizzard conditions over high ground in South Wales and south-west England.^v

March began mild and unsettled but switched to cold, dry weather.^{vi}

Overview of March 1922.

During the first week the general circulation over north-west Europe was cyclonic in nature producing mild and unsettled weather. Strong winds and gales were frequent and culminated in a severe gale over southern England on the 8th. Pressure then built to the north and west of the British Isles. With easterly or northerly winds there was little or no precipitation. The coldest weather was during the latter part of the month, with frequent showers of sleet, snow, or hail.

On the 1st of the month there were gales and strong winds in southern England, with Kew reporting a gust of [49 kt] at 0230, while later in the day a line squall, moving east,

registered a fall in temperature of around [3 C]. Gales were again recorded on the 3rd, 5th, and 6th. Temperatures fluctuated considerably but were generally above average. On the 3rd the maximum temperature at Groningen increased by around [7 C], while maxima at Benson, Gorleston, and Pulham rose to around [15 C]; at Brocklesby, on the 3rd, the maximum was around [14 C]. On the following night minima remained high, [11 C] being recorded at Kew but only [8 C] at Brocklesby. Precipitation was heavy at times, Penzance recording 30 mm on the 1st and 26th and at Eskdalemuir on the 5th.

At 0700, on the morning of the 7th, what appeared to be a rather benign depression began to deepen as it tracked east. By the time it reached Plymouth at 0515 on the 8th the central pressure had fallen to 970 mb and wind speeds in southern England and the Western Approaches had increased considerably, Scilly recording a gust to [94 kt], which had only once before been exceeded. A gust at Quilty, Co. Clare, reached [96 kt] on the 27th of January 1920 before the pen went beyond the edge of the recording chart. With the passage of the trough pressure rose rapidly, and by 1800 had reached 1000mb. Temperatures rose from around [8 C] at 0100 to [10 C] at 0230 then falling again to [6 C] at 0410 when the screen was blown away. Rainfall intensity reached a maximum of 3.8 mm per hour between 0001 and 0100, then decreased rapidly to 0500 when no rain was measured until after 0600. Much structural damage was done. At Plymouth ships dragged their anchors, large trees were uprooted, and a roof, measuring 30 ft by 15 ft was carried nearly a mile. By 1300 on the 8th the depression was centred off East Anglia, having moved eastwards at an average speed of [35 kt].

Behind the depression a north to north-easterly air stream became established as a ridge of high pressure moved in from the Atlantic, and by the 13th had become well established over northern districts. Apart from some occasional rain in the south-west, associated with a depression in the Bay of Biscay, there was little, or no, rain between the 11th and 19th; the greatest fall being 12 mm at Paignton, and 10 mm at Plymouth. Temperatures fell considerably, with severe frost being noted during several nights. A minimum of [-16 C] was recorded at Sarna (Sweden) on the 9th, and [-9 C] on the grass at South Farnborough on the morning of the 11th, the screen minimum being [-6 C].

By the 20th the weather over the whole country had become unsettled, pressure being high over Iceland and depressions over Europe. Cold northerlies produced hail, sleet, and snow showers, with snow being recorded in the Scilly Isles. Snow falls in the north were heavier than elsewhere, with drifts many feet deep being noted. On the night of the 20th-21st severe frost was recorded generally with minima on the ground at Benson reaching [-10 C] and [-12 C] at Plymouth. Severe frost was also recorded in eastern and south-eastern England on the 24th. Screen minima recorded at Grain and Shoeburyness falling to [-6 C], and the grass minimum at Shoeburyness reached [-11 C]. Maxima on the succeeding days were low, the highest at Lympne and Tunbridge Wells being only [1 C] on the 22nd. A depression to the south of Ireland produced a temporary change, however as it tracked

south-easterly during the succeeding days it was accompanied by showers of hail and sleet with the return of the northerlies. On the 31st a depression developed off the south-west coast, pressure rose in the north, and a more easterly air stream developed. Maxima fell to [4 C] or below, except in the south-west, and severe frosts were noted over a wide area.^{vii}

Europe and the Rest of the World.

Poor conditions and low temperatures were present throughout northern and central France, with gales during the early part of the month, and snow towards the end. Temperatures were also below average on the Riviera; on the 26th the maximum was only [1 C] above that of London.

During the first week heavy snow was reported in many parts of the French Alps. Spiders, ants, caterpillars, and other insects previously unknown in the region, fell with the snow and were subsequently buried by another fall.

The Danube overflowed its' banks, on the 17th, around Dobruja.

Unusually heavy rain, on the 28th, filled all but one of the ancient reservoirs in Aden.

On the 31st, another cold storm, similar to that reported in February, paralysed hydro-electricity services in Western Ontario.

Fifteen people were killed and many injured by a tornado in Oklahoma, USA, in the middle of the month. Reports of flooding by the Mississippi, near Helena, Arkansas, were received towards the end of the month. A section of the Missouri-Pacific railway was under water. It is understood that a deep depression covered the whole of the Mississippi and Missouri valleys on the 19th; no further information was available at the time of reporting.

During a severe thunderstorm, on the 22nd, a naval ammunition dump at Rio de Janeiro was struck by lightning and destroyed.

Heavy rain in central and southern Brazil saw rainfall amounts more than 100 mm above average, and many stations had more than 200 mm, or even 300 mm, above normal. The heaviest falls came at the end of the month and produced destructive flooding in the states of Rio de Janeiro and Sao Paulo. However, in the north-east of the country the cotton crop was damaged due to lack of rain while, in the south, the rice crop was damaged by the heavy rain.^{viii}

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

Mean Maximum Temperature: 7.4 C. Average: 9.1 C.

Mean Minimum Temperature: 1.8 C. Average: 1.8 C.

Mean Temperature: 4.6 C. Average: 5.3 C.

England and Wales Rainfall: 68.0 mm. Average: 70.5 mm.

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

Midlands Mean Maximum Temperature: 7.1 C. Average: 8.3 C.

Midlands Mean Minimum Temperature: 0.9 C. Average: 1.1 C.

Midlands Mean Temperature: 4.0 C. Average: 4.7 C.

Midlands Rainfall: 58.4 mm. Average: 75.7 mm.

2022 (Provisional)

Central England (Averaging period is 1991-2020).

Mean Maximum Temperature: 12.3 C. Average: 10.4 C.

Mean Minimum Temperature: 3.5 C. Average: 3.1 C.

Mean Temperature: 7.9 C. Average: 6.7 C.

England and Wales Rainfall: 49.5 mm. Average: 65.4 mm.

ⁱ J Osborne, by email, 4 April 2022.

ⁱⁱ Monthly Weather Report, March 2022, Meteorological Office, HMSO, March 2022, p. 1.

ⁱⁱⁱ The Guardian, numerous dates in March 2022.

^{iv} D J Stanier, by email, 3 April 2022.

^v Climate and Weather, Kington J, Collins, 2010, p. 403.

^{vi} Agricultural Records AD 220-1977, Stratton J M and Houghton Brown J, John Baker, 1978, p. 140.

^{vii} Monthly Weather Report, March 1922, Meteorological Office, HMSO, May 1922, p. 29.

^{viii} Meteorological Magazine, April 1922, Meteorological Office, HMSO, April 1922, pp. 81-88.

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