

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS

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MARCH, 1933.—An exceptionally warm and sunny month with notably high day temperatures.

The distribution of pressure over Europe and the Atlantic at the beginning of March was not very different from that which accompanied the severe snowstorms of February 23rd–26th. A series of depressions extended westwards between latitudes 40° and 50° from the mouth of the Channel to Nova Scotia, and pressure was high around Greenland and over Russia. But an important change had gradually been taking place during the last days of February and continued during the first week of March. This was the gradual northward and eastward expansion of a belt of mild westerly winds and the transformation of these into south-westerly and southerly winds over Western Europe. The weather was very unsettled during this period. By the 8th the Atlantic chain of depressions extended from west of the Azores northwards to within less than 10° of the Pole; on their eastern sides there was an uninterrupted flow towards Western Europe of air from sub-tropical regions south of the Azores. A period of abundant sunshine and high day temperatures set in. This fine weather began to break up about the 15th and rain fell generally with the advance of a system of depressions south-eastwards from Greenland to Scotland and Ireland. Towards the close of this unsettled period cold winds from north-west and north swept across the country during the night of the 19th to the 20th, to be followed by southerlies on the 21st and by another spell of mainly fine anticyclonic weather with high day temperatures. This only changed during the last two or three days of the month to a period of local showers and bright intervals.

Pressure and Wind.—Pressure was a little above the normal in the central and eastern parts of England and in the Shetlands, and below normal elsewhere. In the south of Ireland it was about 5 millibars below the normal.

In the first ten days strong winds and gales were frequent in the West, and another windy period for most districts extended intermittently from the 15th to about the 23rd. A gust of 77 mi/hour occurred on the 15th at Butt of Lewis, and on the 19th 79 mi/hr. at Pendennis Castle and 78 mi/hr. at St. Mary's, Scilly.

Temperature.—In this month, when solar radiation is becoming powerful again and the normal spring tendency for northerly and north-easterly winds has scarcely begun, bursts of unseasonable warmth are not uncommon, but it is extremely rare to find such a persistent tendency for high day temperature as was observed in nearly all districts this month. At Kew and Greenwich temperature failed to reach 50° only on the 20th. In the Greenwich record, that goes back to 1841, there is no other month with such persistent warmth by day. Absence of cloud played a large part in this, and was responsible for the fact that the high day temperatures around the 27th were often accompanied by abnormally cold nights. The diurnal range of temperature was sometimes very exceptional. At Rickmansworth—where soil and exposure are both such as to enhance the range in clear weather—it exceeded 40° on four successive days (26th–29th). On the 28th a reading of 19·2° there in the early morning was followed by one of 66·9 just before 1·30 p.m., a rise of nearly 48°, while at Thetford the range for the same day was 49°. The borough meteorologist at Southport states that no warmer March appears to have occurred in 62 years for which Southport records are available; at Newquay the mean maximum has been exceeded only in 1893.

The extremes for the month were:—(England and Wales) 69°F. at Attenborough, Birmingham (Sparkhill), Park End, South Farnborough and Welshpool, all on the 28th, 17°F. at Thetford on the 28th;

(Scotland) 68°F. at Gordon Castle on the 28th, 21°F. at Balmoral on the 21st; (Ireland) 60°F. on the 28th at Kilkenny, 29°F. at Glasnevin on the 2nd.

Precipitation.—More than the average rainfall for March was recorded over most of England and the eastern parts of Wales, but in those English counties lying to the north and west of Yorkshire there was generally a deficiency. There was a notable deficiency in Scotland; around Inverness only about a fifth of the average fell. In Ireland the fall was not usually very different from the normal. Most of the largest falls of rain came between the 2nd and the 8th; 1·77 inches fell at Holne (Devon) on the 2nd; 1·64 inches at Treacastle (Brecon) on the 5th; 2·50 inches at Inverchaolin (near Dunoon, Firth of Clyde) and 1·20 inches at Valentia on the 8th. Some of the huge drifts of snow left by the February storms in northern England were unmelted well on into March (on high ground near Huddersfield a few remained on the 18th), but although sleet and snow-showers occurred locally in England on the 18th and 19th and there was occasional snow in Scotland, no further heavy falls were reported.

Thunderstorms occurred in the South on the 6th and 7th and again locally throughout the British Isles in the two unsettled periods near the middle and end of the month.

The general precipitation of the British Isles expressed as a percentage of the normal for the period 1881–1915 was 101 per cent., the values for the constituent countries being England and Wales 119 per cent., Scotland 64 per cent., Ireland 99 per cent.

Sunshine.—Over England, Wales, eastern Ireland and practically all except the north-west of Scotland, the duration of bright sunshine was above the average. The excess was usually large and in many instances in the south and east of England the daily mean was between two and three hours above the normal for March and approached the normal for June.

The daily mean reached 7 hours in the south-east of the Isle of Wight, and exceeded 5 hours locally as far north as Aberdeenshire; it was generally above 4 hours in eastern Ireland. This was the sunniest March since 1907 at Aberdeen and Eastbourne, and at Hampstead the sunniest since records began there in 1910. At Oxford and Eastbourne this month's total has only twice been surpassed, in 1929 and 1893. At Ross-on-Wye this was the fourth successive month with a large excess of sunshine.

Fog.—Fog was frequent locally in the north of England and southern half of Scotland. The drop of temperature during the nights of the two principal fine spells appears to have been the cause of most of these.

Miscellaneous Phenomena.—At Oxford a solar halo was observed on 18 days and a lunar halo every evening from the 3rd to the 9th; parhelia and arcs of contact frequently accompanied the haloes.

A lunar rainbow was seen at Edinburgh on the 14th. The aurora was observed in Scotland on the nights of the 18th, 19th, 20th, 22nd, 23rd, 28th and 29th, the display on the 19th being perhaps the most widely reported. A beam of light described as similar to the ray of a searchlight was seen from Kirkwall between 10·5 and 10·20 p.m. on the 23rd, bridging the sky from W. to E. to the southward; wireless reception is said to have been very bad at the time, which coincided with a brief lull between two windy periods.