

# MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE

SUMMARY OF OBSERVATIONS COMPILED FROM RETURNS OF OFFICIAL STATIONS AND VOLUNTEER OBSERVERS IN THE UNITED KINGDOM, AND AT GIBRALTAR AND MALTA, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANIZATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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## Mild, Wet and Windy.

Temperature well above the normal in nearly all districts, a good deal of rain and strong wind, with a fair amount of sunshine, characterized the opening month of the year. Comparatively cold weather prevailed during the first ten days, especially between the 6th and 10th, the minimum thermometer registering 26·4 a at Salisbury on the 7th, 26·5 a at Ardingly (Sussex) on the 7th, and 26·6 a at Balmoral and Eskdalemuir on the 6th, and at Marlborough, Southampton, Hampstead and Rhayader on the 7th, while earlier in the month, on the 3rd, Braemar had recorded a temperature of 26·3 a. At only a few places during this time, did the mean temperature equal or exceed the average. This cold weather was followed, during the week ended the 17th by decidedly warm conditions, the temperature exceeding the normal everywhere, by as much as 5·6 a at Oxford, 5·8 a at Raunds (Northants) and 6·1 a at Salisbury.

It is noteworthy that the mean temperature in Scotland for January was practically the same as that for December, 1919, both months being much warmer than November, 1919. On all previous occasions of great cold in November in Scotland, during the last 60 years, it has been followed by a prolonged spell of weather, for the most part mild.

Although there were very few occasions on which the rainfall on any one day exceeded 25 mm., and many places had little or no rain during the first week, the totals for the month were mostly in excess of the normal. In Scotland, after the 7th, until the end of the month, rain fell on every day at several stations in the West and North-West, often very heavily. In the East and North-East there were many fine days. Towards the North-East the month's rainfall was deficient, but in general there was a well marked excess, amounting to 60 per cent. at Stornoway, Fort William, Poltalloch and Dumfries. Hail was frequent and thunderstorms occurred in the South-West on the 9th, in the North-West on the 11th, and rather widely and with heavy hail on the afternoon of the 31st. Strong winds were very general during the month over the British Isles, and often attained the force of a gale.

The following notes supplied by observers illustrate the general character of the month: Southport (Lancs) "mild, wet and very stormy from South-West and West"; Leyland (Lancs) "wet and stormy month"; Tenbury (Worcester) "a wet, mild and unusually windy month—elm trees in flower, end of month"; Ross-on-Wye (Hereford) "a mild open month, temperature reached or exceeded 50° on 14 days—rainfall nearly double the average"; Sheepstor (Devon) "a very wild stormy month, much fog and rain"; Tavistock (Devon) "the wettest January since 1913, and the greatest number of gales"; Paignton (Devon) "rough, wet and mild, the rainfall has been the highest for the past five years"; Bude (Cornwall) "very mild month, season much advanced. Days were frequently slightly breezy or quiet but were followed by wild, rough nights, the wind dropping again soon after dawn"; Carrigoran (Co. Clare) "very wet and boisterous weather prevailed throughout the month."

**Air Pressure.**—As shown by the map on p. 3, the mean monthly trend of the isobars across the British Isles was roughly West to East, with very little deviation from the normal. The gradient was, however, very much steeper than usual, especially off the west of Ireland. The mean pressure in the south of Iceland being as low as 986 mb. whilst the corresponding figure for the Azores was 1027 mb.

On the opening day of the year there was a depression at the mouth of the English Channel, and another, which had passed across the North Sea, centred over Scandinavia. Between these two systems the weather was generally fair to fine, but rain fell at most of the western stations. There were small falls of snow at many places, as much as 4 inches at Wick. A depression which was indicated over the Atlantic on the 10th, was on the 11th, situated between these islands and Iceland, with a secondary which caused much rain over Ireland and England, with snow in Scotland and England North-East. At some places in Ireland and many stations in England, the rain yielded the maximum daily fall of the month, 35 mm. at Tavistock (Devon), 39 at Ushaw (Durham), and 44 mm. at Sheepstor (Devon). During the morning of the 11th, a secondary passed across the British Isles causing strong south-westerly gales in the English Channel which blew throughout that day, and well into the next. Towards the evening of the 11th, the wind attained the force of a gale over the country generally, Copdock (Ipswich) reporting a "violent gale" at night, Rhayader "terrific wind and hail storm," Totland Bay "an elm tree blown down," Sheepstor (Devon) "Violent south-west gale and torrents of rain," Guernsey "whole gale all night." These gales were accompanied by considerable falls of rain nearly everywhere, a good deal of electrical disturbance, thunder or lightning being observed at many places between Cahirciveen on the West-Coast of Ireland and Yarmouth on the East Coast of England and as far north as the North-West of Scotland. Hail fell along the East Coast of England.

The wind, which towards mid-day of the 12th had abated, increased to gale force towards evening owing to the rapid passage of a secondary across the North of England. A gale swept across England and the South of Ireland during the night.

On the evening of the 13th a small secondary rapidly crossed England from West to East, reaching the South of Sweden by 7h. on the 14th. Subsequently rain became general, with thunder at Birr Castle, Holyhead, and Liverpool.

A deep depression over Iceland on the morning of the 23rd, caused gales locally in Scotland North and strong South and South-West winds over England. Small secondaries passed over during the day, in consequence of which the weather became dull and damp, with fairly heavy rain in Ireland and some parts of England, 10 mm. at Roche's Point (Co. Cork) and 17 mm. at Keswick (Cumberland). On the morning of the 27th, a deep depression was situated to the North of Ireland, which moved first in an Easterly, then in a North-Easterly direction. This system caused gales and rain over Ireland and Scotland, and later, with the movement of the depression, gales spread Eastward and were experienced in all districts, unusually severe over Ireland, Scotland and the West coast of England. At Quilty (Co. Clare) the Anemometer recorded a gust of 50 m/s. (over 110 mi/hr., the strongest on record for the British Isles). At Queenstown Harbour considerable damage was done to the quays and wharves; a gust of 37 m/s. (83 mi/hr.) was recorded at Weaver Point. Blacksod Point (Co. Mayo) reported a squall reaching force 12 on the Beaufort Scale. Gusts of 70 mi/hr. or more were recorded at Cahirciveen, Holyhead and Pendennis Castle. A wind of force 9 on the Beaufort Scale was reported at telegraphic stations from St. Ann's Head (Pembroke) to Wick. Among the heavy falls of rain on this day were 31 mm. at Sheepstor, 38 mm. at Ashburton, and 47 mm. at Princetown, all in Devon.

A small depression passed rapidly from the West of Ireland to North East Scotland on the 29th. This caused South-Westerly gales in the West of Ireland and South-West England. Portland Bill recorded a wind force of 9 on the Beaufort scale at midnight. Rain was general over the British Isles, with hail and sleet in the North of Ireland, North of England, and in Scotland.

**Temperature.**—Although the month opened with temperature below the normal in all districts and indeed at nearly every station, the mild weather which followed more than compensated for this, except in Scotland North. Here the mean temperature, as in January, 1919, was below the normal by 0·7a, but with this exception, and that of Scotland East where the mean was exactly normal, there was an excess in all districts. The amount of excess ranged from 0·2a in Scotland West to 1·7a in the Midland Counties. The Eastern districts were relatively warmer than the Western. Excluding the Midland Counties, England East showed a greater excess than any other district: the actual mean temperature was only 0·5a below that of the Channel Islands, while the difference from normal was 1a greater. Of the individual stations, those which showed the greatest deviation from the normal were Cheltenham with an excess of 4·3a, Wilton (Salisbury) and Raunds 4·4a, and Wokingham 4·7a. Deerness and Braemar gave a deficit of 0·6a, Strathpeffer 1·0a, and Lerwick 1·2a.

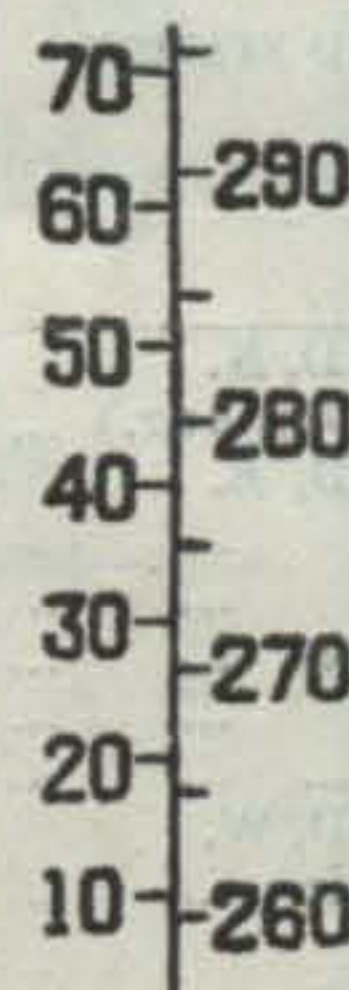
The absolute maximum exceeded 286a at a large number of stations and reached 289a in Dublin, and at Newcastle (Wicklow). The absolute minimum was less than 266a in many places. Braemar touched 263a.

**Precipitation** which was made up of rain, snow, sleet and hail, exceeded the normal in all districts. The excess ranged from 8 mm. in England East and 10 mm. in Scotland East, to 51 mm. in Ireland South, 52 mm. in England South-West and 70 mm. in Scotland North. Thus, in two consecutive months, December and January, rainfall over the British Isles as a whole has been over 40 per cent. above normal. Not many stations had heavy falls of rain, few exceeded 30 mm. in 24 hours. Among the heaviest were the falls reported round Dartmoor on the 10th, 44 mm at Sheepstor, 47 mm. at Princetown, and 54 mm. at Ashburton; 44 mm. was also measured at Blacksod Point the same day.

**Sunshine** differed but little from the normal, and was much more evenly distributed than in January of last year. The amount ranged from 0·78 hr. per day in Scotland North, the only district with a daily mean of less than 1 hr. per day, to 1·98 hr. per day in England North-East. The deviation from the normal ranged from a deficit of 0·01 hr. per day in England South-East and England South-West, to an excess of 0·54 hr. per day in England North-East; the Eastern districts had an aggregate of 0·85 hr. per day in excess of the Western.

**Optical Phenomena.**—Halos were numerous during the month. Solar Halos were seen on 2nd, 4th, 9th, 14th, 15th, 16th and 30th. Lunar Halos on the 1st, 2nd, 3rd, 7th, 28th, 29th and 30th, and Lunar Coronæ on the 2nd, 3rd, 4th, 28th and 29th.

**Aurora** was seen at Baltasound on the 17th, 19th, 20th; at Deerness on the 9th, 10th, 11th, 23rd; at Kirkwall on the 3rd, 4th, 5th, 11th; at Gordon Castle on the 9th, 11th; at Aberdeen on the 9th, 11th, 17th; near Edinburgh on the 11th; at Paisley on the 9th; at Eskdalemuir on the 17th, 20th, 22nd, and at Donaghadee on the 17th. Zodiacal light was seen at Raunds on the 8th, and at Oxford on the 16th.



Temperature Scales.