

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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Damp, Misty and Foggy.

During the greater part of its career the month was true to type, and very generally was damp, misty, and foggy. Its opening days were very mild and unsettled, and there was also a mild spell during the closing days, but the intervening period was cold and foggy and on many occasions especially round about the 20th there was sharp frost; on several nights the ground frosts were severe. As in October the preponderating winds were from the South and West, and there was a marked absence of winds from a northerly quarter, conditions which proved unfavourable for snow, sleet, and hail, which were rarely reported. In Scotland the month opened with some fairly warm days, the highest thermometer readings of the month generally occurring on the 2nd. Temperature then remained moderately high until the 10th, when a cold spell set in, lasting about a fortnight. From the 17th to the 19th the days in most localities were very cold, and at some places the thermometer barely reached 273a; at Dumfries the temperature for the week ending on the 23rd was 4.5a below normal. After this cold spell there was a decided recovery of temperature, and late on the 30th an exceptionally mild southerly current of air was in evidence. From the 11th onwards much fog occurred in the Firths of Forth and Clyde.

The following notes supplied by observers illustrate the general character of the month:—*Allans Green, Northumberland*.—As a whole the month was fine and dry, but with severe frosts at night after the 10th. There was no snow, and cattle were out in the fields the whole time; but not much ploughing was done. *Kenninghall, Norfolk*.—The greater part of the month was exceptionally fine and dry, but with considerable frost at night. From the 5th to 27th the wind was light in force. *Weston Turville, Bucks*.—The first half of the month was very favourable for tillage, but after the break-up of the frosts the ground became very sticky, the month closing with a good deal of mist. *Tenbury, Worcester*.—At the beginning and end of the month the weather was mild and damp, with frost and fog during the middle period. Owing to the wet air there was much surface moisture, which kept the soil wet and heavy, so that sowing of winter grain was much delayed. *Southport, Lancs*.—There was a great deficiency of all northerly winds and more than twice the normal number of hours of south-easterly winds. The total evaporation from the 3 ft. square tank was 3.5 mm, only half the November normal. *Sheepstor, Devon*.—From the 8th to 22nd was an extraordinarily fine time for November, with brilliant sunshine and very blue skies. The most remarkable feature was the almost entire absence of cirrus clouds, which were observed only on the 8th and 12th, an absence associated with a persistence of winds in the upper regions of the air south of West and East. After the 22nd, when the upper air backed to North-West and West, this type of cloud was rarely absent. *Dublin (City)*.—The month was of an average mean temperature, unsettled at the beginning and also at the close, when South-West or West winds prevailed. The intervening period was fine and quiet but often dull. Sharp frost occurred on the 19th. High barometer readings were recorded from the 9th to 21st, and there were very low readings on the 1st, 2nd and 4th. Snow, sleet, and hail were entirely absent. *Carrigoran, Co. Clare*.—The first nine days of the month and the last eight were wet and gloomy; but the intervening days were quite dry and unusually clear, with severe night frosts occasionally. The dry spell enabled farmers to secure the potato crop, and also to clear off arrears of work in hay and corn harvests. *Hurdlestown, Co. Clare*.—The month's rainfall was 3 mm. above the normal, and the rain days one below. As a whole the month was fairly fine, but with severe night frosts on three occasions.

Air Pressure.—During the early part of the month the weather of the British Isles was dominated by atmospheric depressions of considerable depth and intensity which moved along tracks that followed a northerly or north-easterly course. On the 1st at 7 h. a depression (track A) was centred near the Scilly Isles, and as it moved northwards it rapidly increased in depth, the pressure at Blacksod Point at 7 h. on the following morning falling to 971 mb. Gales from the South and South-East occurred on nearly all coasts, strong winds from the South-West continuing in the North of Scotland till the following morning, when the centre of the depression passed to the northward of the Farøe. An unusually high temperature for the time of year was associated with the passage of this system, and it also brought heavy rain, especially in the West and South-East, the total precipitation at Falmouth, for instance, on the 1st being as much as 31 mm. Following closely on this depression a fresh disturbance (track B) moved up from the Bay of Biscay, and crossing Northern France eventually dispersed over the North Sea. This depression brought rain to most parts of the Kingdom, the largest amounts falling in the South and East of England, as much as 28 mm. being recorded at Clacton on the 3rd. During the night of the 4-5th a deep depression (track C) travelled rapidly from the South-West of Ireland, and by 7 h. on the 5th was centred between Orkney and Shetland, the pressure at Lerwick falling to 971 mb., the passage of this depression causing gales from between South and West in most parts of the British Isles. The rise of the barometer in the rear of this disturbance over the South of Scotland was unusually rapid. By 7 h. on the 8th another depression of great depth

(track D) was centred to the North-West of Stornoway, where the pressure was as low as 962 mb. (28.4 in.), the gradient being very steep between this point and Scilly, where the corresponding value was 1,012 mb. (29.9 in.). This system caused violent gales from the Westward on the North coast of Ireland, and from the South and South-East in the North of Scotland. The accompanying rain was slight or moderate, but was general, and in places there was hail. At some of the stations in the West of Scotland the week ended the 9th was considered to be the roughest of the year, great damage being done by wind and rain. At Gordon Castle, on the night of the 7-8th, 5,000 trees were blown down, and, during this period, a wind of force 12 from the South-East was reported at the watchtower on Ander Hill, Lerwick (at 7 h. on the 8th), and force 10 from the South at Wick. At Dyce (Aberdeen) a gust of 26 m/s from the South was recorded at 4 h. 50 m., Aberdeen recording a gust of 28 m/s from the South-South-East at 6 h. 35 m. After the 10th the tracks of the depressions were mostly to the northward of Scotland and until the 23rd the distribution of atmospheric pressure over the British Isles was mainly anticyclonic. Thereafter, until the end of the month, the weather was largely controlled by secondary depressions which, more especially during the last two or three days, maintained showery and unsettled conditions over the country generally. As shown by the map on p. 123, the mean monthly air pressure was above the normal, the excess ranging from 0.3 mb. at Blacksod Point to 5.6 mb. at Yarmouth. The general trend of the isobars was of the south-westerly type. At the telegraphic reporting stations the lowest individual barometer reading was 962 mb. at Stornoway on the 8th, and the highest 1,036 mb. on the following day at Scilly. The highest gusts recorded by the anemometers were 35 m/s at Pendennis Castle on the 2nd, 34 m/s at Edinburgh on the 8th, and 33 m/s at Weaver Point (Cork Harbour) on the 7th.

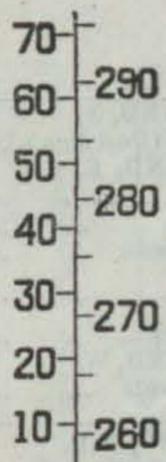
Temperature.—Except in Ireland South, where the mean monthly temperature was normal, there was a deficiency of warmth in all districts, although the defect was nowhere at all large, ranging from 0.9a in Scotland East to 0.1a in Scotland North. Very generally the highest readings of the month were recorded on the 1st or 2nd, maxima as high as 289a being registered at a number of stations. A notable feature also was the high minimum recorded in places on the 2nd, the reading at Portsmouth and Worthing, for instance, on this day being 286a. Commonly, the lowest temperature occurred about the 18th to 20th, the ground frosts about this time being especially severe. Some very low maxima also were recorded, 271a occurring at Scaleby (near Carlisle) on the 18th, and 274a at Mayfield (Staffs.) on the 20th. The lowest temperature recorded during the month was 264a, the reading at Balmoral, Braemar, and Eskdalemuir on the morning of the 19th.

Precipitation.—Except in Scotland West, where there was an excess of 12 mm., the rainfall of the month was below the normal, the shortage ranging from 34 mm. in England North-West to 2 mm. in Ireland North. At some of the Scottish stations, however, there was a large excess, and at Poltalloch it was 99 mm., at Greenock 74 mm., and at Rothesay 68 mm. At Fort William, more than three-quarters of the month's rainfall was accounted for by the first ten days, and at Edinburgh more than half by the 1st and 4th; while at Aberdeen nearly the entire month's rainfall fell during the first week. The highest individual daily falls fell to the lot of the Scottish stations, 82 mm. being recorded at Gruline (Mull) on the 7th and 68 mm. at Ardtornish; while, on the 4th, Ardanadam had 55 mm., Leadhills 53 mm., and Rothesay 50 mm. Other heavy daily falls were 54 mm. at Baeddelert on the 10th, and 52 mm. at Ashburton on the 4th. In Snowdonia at Copper Mill the total rainfall was 343 mm., and at Intake 271 mm. At the following stations the duration of the month's rainfall is given in hours: Aberdeen 35, Huddersfield 54, Worksop 37, Kew Observatory 48, Sevenoaks 75, New Malden 70, Eskdalemuir 88, Blundellsands 54, Bolton 77, Darwen 87, Hutton 61, Lancaster 54, and Valencia Observatory 73.

Sunshine.—Except in Ireland South, where there was a small deficiency of 0.07 hr., the mean daily amount of sunshine was above the normal, the largest excess being 0.73 hr. in Ireland North. The daily means ranged from 1.40 hr. in Scotland North to 3.11 hr. in the English Channel.

Optical Phenomena.—Solar halos were frequently seen during the early days of the month at several of the southern stations, and lunar halos and lunar coronæ were seen round about the 20th.

Aurora was seen at some of the Scottish stations on the 5th, 10th, 11th and 21st; but the most widely observed display occurred on the 29th, the aurora of this date being in many instances described as brilliant.



Temperature Scales.