

## 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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## Dull and Wet.

January was a dull and wet month, with wintry conditions prevailing in the opening days, and again during the last week, but mild in the interval. The mean temperature was nearly everywhere below normal. In most cases the deviation from the latter was more marked in the maximum, than in the minimum temperature. The mildest period was about the 14th, the weather becoming very cold at the close of the month.

The following are typical remarks on the weather:—The observer at *Copdock (Ipswich)* described the month as "very dull and wet, yielding the largest number of rain days, and the least number of days with sunshine, since 1901;" at *Kenninghall (Norfolk)*, "Very changeable weather, with no frosts of any account till the last few days;" at *Oundle (Northants)*, "Very cold sunless month;" at *Warlingham (Surrey)*, "The total rainfall has been exceeded on only two occasions during the past 26 years."

**Air Pressure.**—As shown by the map on p. 3, pressure was everywhere below the normal; the deviation was least in Scotland East, and greatest in Scotland North, so that on the average the gradient was less than usual. The year opened with the passage of a deep depression across the British Isles, from West to East. On January 1st and 2nd gales occurred in the western and northern districts, and in the rear of the accompanying depression there was heavy snow in Scotland and the English Midlands. Another depression appeared off our South-West coasts on January 6th. In its passage northwards across Ireland to the Hebrides it occasioned gales in the English Channel; a strong gale, possibly a line squall, was reported at Whitby, and on the night of the 9th, the schooner "Fleetwood," which was proceeding from Wexford to Newport, was blown ashore at Carnarvon. Gales were also reported in the Western Channel on January 27th, in association with a depression which moved rapidly from Iceland across the British Isles to France.

The cold weather at the end of the month was associated with the spreading of a depression from Scandinavia across the British Isles. Winds from East and North-East at this time became general over England and the South of Ireland, and brought a cold air from the Continent. The sky being overcast no very intense cold was developed.

**Temperature.**—The District Values were in all cases below the normal, and the deficit varied from 0.4a in England East and South-East, and the English Channel, to 0.8a in Scotland East, and 0.9a in Ireland South. The absolute maximum temperature exceeded 28.3a at a large number of stations, but at only three—Bawtry, Westminster and Guernsey—did it reach or exceed 28.6a; at one, Glasgow, it failed to go beyond 28.0a. At the end of the month, the maximum was as low as 27.1a at Rothamsted and Hitchin, and 27.0a at Hemel Hempstead.

Although at a few stations the minimum temperature was never above 27.4a it went above 27.8a in most places, and on the 15th, it did not fall below 28.2a at Cheltenham and Clifton, and 28.3a at Bournemouth, Teignmouth and Guernsey (Villa Carey). Except in the Channel Islands, the minimum everywhere went down to, or below, the freezing point, touching 26.6a at Garforth (Yorks) and Porton (Wilts), 26.5a at Leyland (Lancs), Stonehenge, and Eskdalemuir at the end of the month.

Ground frosts were numerous and some very low readings were recorded by grass minimum thermometers, 26.3a at Bennington, Berkhamsted, and Hemel Hempstead, 26.2a at Garforth (Yorks) and Bradford, and 25.9a at Bucklebury Place (Berks).

**Precipitation.**—Except in Scotland North, where there was a deficiency of 50 mm., the rainfall exceeded the normal in all districts. The amount of excess varied considerably. It was only 8 mm. in Scotland West, while in the English Channel it was 79 mm. Over England the excess was greatest in England South-West (50 mm.), and England South-East (57 mm.).

The monthly amount of rain at many stations was more than double the normal, 230 per cent. at Portsmouth, 231 per cent. at Spurn Head and Ventnor, 241 per cent. at Raunds (Northants), 242 per cent. at Portland Bill, and 252 per cent. at Bournemouth.

The heavy rainfall of the month was not due to any exceptionally large daily falls. Only a comparatively few stations recorded more than 25 mm. in any one day, the largest amount being 41 mm. at Sheepster (Devon) on the 14th, in reference to which the observer

speaks of a "deluge of rain for 24 hours." One of the most persistently wet days was the 20th. At Belper it "never ceased raining," at York "steady rain" for 22 hours, and at Lincoln "rain through day and night," were reported.

Thunderstorms, or thunder alone, occurred on several days between the 1st and 15th, and again on the 25th. At Sheepstor (Devon) after a "very wild day with incessant rain" from 8h. to 20h., there was "one terrific crash of thunder instantly after very blue lightning." On the evening of the 9th there was a thunderstorm at Ardingly (Sussex), Bognor, and Ventnor; along the South Coast and the Isle of Wight on the evening of the 10th; at Lancaster on the 15th, at Cromer and Ross on the 16th, and at Markree Castle (Sligo) on the 25th. Thunder was heard in the early hours of the 2nd at Armagh; at Shaftesbury on the 3rd; at Seskin on the 15th, Lancaster and Woolacombe on the 16th, and at Markree Castle on the 26th. Lightning was seen at Totland Bay on the 9th, at Dublin on the 10th, and at Bognor on the 15th.

Hail was very frequent and was reported on most days during the first three weeks, and on every day during the last week. Most of the falls were confined to the southern part of the British Isles. On the 3rd it fell in the southern part of Hampshire, including the Isle of Wight; on the 6th in Kent and Devon; at Aldershot, Wilton, Weymouth and Sheepstor on the 7th; and along the Sussex coast on the 8th. On the 9th a very wide area was affected, extending from Felixstowe in England East to Seskin in Ireland South-East and including the South Coast of England from Kent to Cornwall, the Isle of Wight and Guernsey. There was hail in Lancashire and North Wales on the 26th.

Snow was very general in the Midlands and northern counties of England during the early days of the month. It was lying on the ground for some time, the depth varying considerably. On the 3rd it ranged from 3 in. at Belper to 14 in. at Buxton; and on the 4th from 2½ in. at York to 7 in. at Huddersfield. At Meltham "most of the telegraph wires were broken down by the wet snow." The damage to the telephone and telegraph systems was both serious and extensive. The weight of the snow broke every telegraph and telephone wire in the town and district of Bakewell in Derbyshire, the town being completely cut off from telegraphic and telephonic communication. During the last few days of the month snow fell over the greater part of the country, the depth varying on the 27th from 2 in. at Birmingham to 9½ in. at Rothamsted; and on the 28th from 2 in. at Tunbridge Wells to 11 in. at Hemel Hempstead.

While the wet character of the month is shown by the total amount of rain, and the number of rain days, it may be noted that at many stations some rain was measured on each of 16 consecutive days. At 15 stations rain was measured on each of 21 consecutive days, and at Belfast on 31 days. Counting the number of consecutive wet days up to December 31st, with those of January, Belfast had 37, Gwernyfed and Falmouth 44, Rhayader 50, Fulbeck 51, Ilfracombe 52, Beddgelert 53, Glanleam (Valencia Island) 56, Sheepstor 61, and Tavistock 63.

As a result of the frequent and heavy rains serious floods occurred. At Southport the "flooding was more extensive than at any time since 1882," and it was reported that the Nene Valley, from Northampton to Peterborough, was one huge lake. Serious floods occurred along the Valley of the Shannon at Athlone.

**Sunshine.**—The mean daily amount of sunshine varied from 1.06 hr. in England East to 2.08 hr. in Ireland South. Scotland East, England North-East and South-East, the Midlands, and the Channel Islands showed a deficit, which ranged from 0.06 hr. per day in the Channel to 0.64 hr. per day in England East. In each of the other districts there was an excess which ranged from 0.09 hr. per day in England North-West to 0.42 hr. per day in Ireland South.

A good deal of fog was experienced, that of the 13th was the most dense, persistent, and general, many observers reporting a dense fog all day. At Dover it was "impossible to see ten yards ahead."

**Optical Phenomena.**—A solar halo was seen at Dublin on the 13th, and lunar halos were recorded at Bennington, Hitchin, Mayfield (Staffs.) and Bognor on the 6th, at Ross on the 9th, and at Whitby on the 13th.

**Aurora** was seen at Deerness (Orkneys), Aberdeen, Eskdalemuir, Seskin (Carrick-on-Suir) and Cahirciveen (Valencia Observatory) on the 3rd, at Eskdalemuir on the 4th, at Aberdeen on the 5th, 6th, and 16th, at Deerness, Aberdeen and Fort William on the 18th, at Fort William on the 28th, and at Deerness and Aberdeen on the 31st.