

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

(Supplement to the Weekly Weather Report.)

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

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE,

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SUMMARY OF OBSERVATIONS.

Pressure, Winds and Weather.—The month now under review was divided between two well-defined and nearly equal periods of widely different conditions of atmospheric pressure. An area of high barometer readings which had made its appearance over the United Kingdom, from the Atlantic, before the middle of January became the dominant feature in the situation over the western half of Europe, and for five weeks, down to the middle of February, it maintained its ascendancy without any very striking interruption. In January the central space of the system varied its position from day to day between these islands and the Continent, but during the first eight days of February it remained practically stationary over the British Isles, the barometer attaining its maximum height on the 1st, when it stood at 30·8 in. and upwards over the greater part of the country, reaching 30·85 in. at Donaghadee, and 30·86 in. at Castlebay. A slight break in the distribution occurred on the 10th, occasioned by a disturbance which had for some days been in the neighbourhood of the Azores. On the evening of the 7th, it passed north-eastward between the islands, and arriving off the south-west of Ireland in the night of the 9th, it assumed a "V"-shaped formation and it moved eastward across England on the following day, finally dispersing over the North Sea on the morning of the 12th. This disturbance exercised but little influence on our weather, producing small quantities of rain, and not much wind. Immediately in its rear the anti-cyclonic conditions were resumed, but the highest pressure was now transferred to Eastern Europe, and by the 15th, when the barometer had passed above 30·5 in. in most parts of the British Isles, pressure had increased to nearly 31 in. in the south of Russia.

A marked change in the pressure distribution was now in course of development. On the 9th a series of deep cyclonic systems began to move eastward in the vicinity of Iceland. At first their centres passed up between Iceland and Greenland and on to the Arctic Sea, but after the 15th, the anti-cyclone receded across France, and the Peninsula, towards the Azores, and throughout the remainder of the month all the depressions which appeared on the upper region of the Atlantic progressed along paths to the eastward or north-eastward, between Scotland and Iceland, the areas of the successive systems embracing practically the whole of the British Isles. They were of considerable depth, the barometer frequently standing below 29 in. in the far north, on as many as eight days in Shetland, the lowest reading of the month in the British Isles, 28·29 in., being registered at Sumburgh Head on the 23rd. Owing to the steady persistency of high values in the earlier period the mean pressure for the whole month was in excess of the normal at all stations excepting Sumburgh Head, where there was a deficiency of 0·03 in. Elsewhere the excess ranged from 0·04 in. at Wick, and 0·06 in. at Nairn and Aberdeen to 0·23 in. at Roche's Point, and 0·24 in. at Jersey. The highest mean pressure, above 30·3 in., was over the Bay of Biscay and Western France, the lowest, below 29·5 in., over Western Iceland. At the home stations the values ranged from 30·29 in. at Jersey to 29·76 in. at Sumburgh Head, so that there was a mean Westerly to South-Westerly gradient of 0·53 in., against a normal of 0·26 in. Winds from between South and West prevailed in all districts, with a fair proportion at North-West or North in some localities.

Under the high pressure system of the first half of the month, the weather conditions were of a very quiet character, the only instances of a wind force exceeding a strong breeze occurring at Jersey, Scilly, Malin Head, and Stornoway. The feature of the period was its dryness. Over an extensive region the weather was rainless, until the passage of the "V"-shaped disturbance of the 10th, already mentioned, but the precipitation on this occasion, although general, was everywhere unimportant. Down to the 20th or 22nd the dryness was maintained at a large number of stations, one or two very slight showers being recorded. This dry spell had commenced as far back as January 11th or 12th, no rain falling on 20 or more successive days at numerous places, 26 days at Bidston Observatory and Ruthin, 28 days at Mayfield, Staffs., and Newcastle, Wicklow, 29 days at Braceland and Worcester Lodge, Forest of Dean, Bath, Birmingham and Colwyn Bay, in nearly every instance ending on February 9th, while at Dursley, Gloucestershire, no rain was measured on any of the 37 days, January 12th to February 17th. Other places had only small aggregates, including dew and moisture deposited by fogs. Great Billing totalled 0·08 in. in 27 days, Sandwich 0·17 in. in 35 days, and Tonbridge 0·19 in. in 41 days, January 13th to February 22nd. The temperature during this period of drought was as a rule moderate, but the opening days of February were severely cold throughout the country, the thermometer in the shade falling to 20° and below at a large number of stations on the 1st and 2nd, to 12° at Wokingham, 11° at Balmoral, and 10° at Garforth, and remaining below 35° in the afternoons, 31° at Wisley, Manchester and Glasgow, and 30° at Markree Castle and Ruthwell.

With the change in the distribution of pressure the conditions became very unsettled and stormy, the result being that on fourteen consecutive days, the 15th to the 28th, the force of a strong gale (force 9) was attained at one or more of the telegraphic reporting stations. A whole gale (force 10) was felt from South-West or West at Malin Head on the 15th and 16th; at Spurn Head on the 17th; at Malin Head on the 18th; Scilly on the 21st; Malin Head on the 22nd; Malin Head, Scilly and Spurn Head on the 23rd, with the deepest depression of the month, and a very steep pressure gradient of 1·3 in. between Shetland and Jersey; at Spurn Head on the 24th; and at Malin Head on the 28th. The anemometers registered gusts at the rate of 70 miles an hour at Aberdeen on the 17th; of 66 miles at Pendennis and Roche's Point, 67 miles at Llaneugrad and Quilty, and 68 miles at Southport on the 23rd; and 72 miles at Southport on the 26th.

In the extreme north and west the dry weather came to an end on the appearance of a deep cyclonic system over Iceland in the night of the 12th, its South-Westerly wind bringing heavy rain to various parts of Scotland and Ireland. On the 13th Oban registered 1·2 in., Ford (Argyll) and Valencia Island 1·3 in., Glencarron 1·6 in., and Cruachan 1·8 in. This was the commencement of a very wet spell of eleven days in western Scotland. In the five days, 13th to 17th, Glencarron registered a total of 6·1 in., and in the three days, 21st to 23rd, a further 3·5 in., Fort William receiving 4·5 in. in the same three days, while Cruachan received the very large amount of 11·1 in. in the twelve days, 12th to 23rd. The largest of the daily quantities were 1·6 in. at Rothesay, 1·7 in. at Glasgow and Poltalloch, 2 in. at Ford, 2·4 in. at Inverary, and 2·5 in. at Cruachan on the 17th; 1·7 in. at Cruachan and Fort William on the 21st; and 1·8 in. at the latter station on the 22nd. There were some large amounts in the north-west of England on the 14th, more than an inch at Darwen; on the 16th, over an inch at Burnley; on the 18th, 1·2 in. at Uldale, and 3·7 in. at Seathwaite (when, also, 1·3 in. fell at Glenarm, Antrim, and 1·4 in. at Seaforde Down); and on the 21st, up to 2·1 in. at Arncliffe. In the southern districts the only rainstorm of note occurred on the 27th, mainly in South Wales and the south-west of England, the records ranging up to 1·4 in. at Abersychan and Sheepstor, 1·6 in. at Pant-yr-Eos (Monmouthshire), and 1·9 in. at Arlington. Hail and snow showers were comparatively frequent, but they were unimportant. There were very few thunderstorms, about half the number reported being in the extreme north, between Caithness and Shetland. Mildness ruled during the disturbed period, many of the day maxima exceeding 55°, Torquay registering 60° on the 17th. High minima were also rather frequent, 50° at several stations on the mornings of the 18th and 28th, and 51° at Barnstaple on the 25th.

The mildness of the second half of the month more than balanced the cold of the first half, so that the mean temperature for the whole month was above the normal nearly everywhere, by more than 2° in several places, nearly 3° at Scarborough and Worksop.

Aurora was seen at various stations in Scotland on the 21st-25th, 27th, and 28th, and at Aspatria on the 28th.

Fog was seldom reported inland, but on the western, southern and eastern coasts it was experienced at one or more places almost daily.

The temperature of the sea water round our coasts did not differ materially from what it had been during the preceding month, a little lower in some instances, but in nearly all neighbourhoods it was warmer than the air on shore, by 3° or 4° locally, by as much as 5° at Wick.

Rainfall.—As a rule there was a deficiency of precipitation over eastern, midland and southern England, the Channel and Southern Ireland, an excess in most other districts. At Glencarron there was an excess of 5·9 in. at Fort William, of 5·2 in., and at Poltalloch of 4·5 in., while the largest deficiencies were 1·3 in. at Cockle Park and Killarney, 1·4 in. at Jersey, and 1·5 in. at Roche's Point. In the mountainous regions of the west and north-west there were many very large aggregates, more than 10 in. at a number of stations, 13·2 in. at Cruachan, 14·1 in. at Ardnadam (Holy Loch), and 20·6 in. at Seathwaite. There were also numerous instances of less than an inch, down to about 0·6 in. at Whitby, Felixstowe, Sandwich and Newcastle-on-Tyne. The frequency ranged from 24 days at Stornoway, Gruline and Ford, and 22 days at Cruachan, Fort William, and Cromer to 9 days at Coventry, Tonbridge and in the Forest of Dean, 7 days at Dursley.

Bright Sunshine.—The duration of sunshine was rather variable. Strathpeffer 16 hours, and Scilly 15 hours, below the average, while Eastbourne, Tunbridge Wells and Totland Bay had 14 hours, and Westminster 20 hours, above the average. The total duration ranged from 94 hours at Dover, and 93 hours at Hastings (34 per cent. of the possible), and 91 hours (33 per cent.) at Bournemouth and Jersey to 27 hours (10 per cent.) at Manchester.