

## 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.**—Following immediately in the rear of the cyclonic disturbance which occasioned the very tempestuous weather at the close of September there came a decided change in the type of pressure distribution over and around the British Isles. By the morning of October 1st this country had been brought under the influence of an extensive area of high pressure, whose central space was out on the Atlantic, about the 20th meridian. Thenceforward, through the first eighteen days of the month, this anticyclone was the dominating factor in determining the weather over these islands. For a week the region of maximum pressure remained out on the ocean, the barometer ascending to about 30·7 in. on the 4th, in 55° N., 20° W. On the 8th the centre was over Iceland. From this locality it advanced along a general south-easterly course, crossed Britain, from the Hebrides to the south-east coast, and by the 12th it had reached Central Europe where it dispersed. The highest pressure over these islands was attained on the 10th, the barometer mounting to 30·5 in. and upwards at all stations, and above 30·6 in. from the north of Ireland to the Tyne and the Forth, to 30·63 in. at Leith. On the 14th a new anticyclone developed over Scandinavia and moved down to Central Europe, these islands being under the influence of the western part of the system.

After the 18th a cyclone moved gradually eastward from the Atlantic, and on the 21st its centre lay at the west of Ireland. For the remainder of the month the weather was dominated by this and other low pressure systems arriving from the Atlantic. The lowest readings reported were 28·77 in. at Holyhead on the 26th, and 28·77 in. at Lerwick on the 30th.

For the entire month the mean distribution of pressure differed greatly from the normal, a belt of relatively high values, above 29·9 in., extending from Iceland across Britain and southern Scandinavia, with local patches above 29·95 in. in Scotland and eastern Iceland. On either side of this area the values diminished to below 29·8 in. on the Bay of Biscay and in the far north of Norway. Over the greater part of this country the results were higher than usual, by as much as 0·18 in. at Lerwick, and 0·17 in. at Stornoway, but along the south-western coasts they were lower, to the extent of 0·06 in. at Scilly. Instead of the normal Westerly to South-Westerly type the mean gradient was South-Easterly to North-Easterly and Northerly, and winds from these points were most prevalent.

During the first four days of the month there was a considerable Northerly gradient between the high pressure beyond Ireland and depressions extending from the Bay of Biscay to Denmark, so that on each of these days strong or high North-Westerly to North-Easterly winds were experienced, attaining the force of a gale locally. The conditions then became much quieter, and continued so through the remainder of the anticyclonic period. The weather generally was dry for close upon three weeks, no rain being measured at many stations on twelve or more consecutive days, fifteen days in Anglesey, at Colwyn Bay and Kilmarnock, and sixteen days at Ruthwell (Dumfries). There were, however, some interesting exceptions. On the 4th and 7th shallow disturbances on the Continent caused heavy rains in Kent, the amounts on the former date ranging up to 1·5 in. at Tonbridge, and on the latter to 1·2 in. at Broadstairs. An extremely slight irregularity in pressure on the 13th, extending up the Channel to Belgium, brought the wind into East over our south-eastern counties, where heavy rain fell, up to 1·3 in. at Hemel Hempstead, while Jersey had 2·4 in. The dry period was marked by frequent and sometimes dense fogs over the inland districts.

With the reversal of the pressure distribution the character of the weather underwent a complete change, bringing to a close the great drought of 1911, which had held, with but few and brief interruptions, for about four months. The Isleworth observer notes that all through this long period the ground below a depth of 4 in. remained dry continuously; and the Broadford (Co. Clare) observer reports that all the lakes in the district were lower than ever they were before, exposing the remains of some remarkable ancient deer.

From the 19th onward wind and rainstorms occurred except on the 28th. In nearly every instance the gales were Southerly to Westerly in direction. By the 21st the wind had increased to a strong gale (force 9) at Scilly and Pendennis, gusts having a velocity of 68 miles per hour being registered at the latter station. On the 22nd the strength of a whole gale (force 10) was reached at Scilly, the anemometrical records showing gusts at the rate of 60 miles an hour at Brighton, 64 miles at Pendennis, and 66 miles at Scilly. Next day a whole gale was felt at Dungeness, the Dover anemometer registering gusts of 64 miles an hour. A strong gale blew at Dungeness

on the 25th, at Malin Head (from East) on the 26th, and at Jersey on the 27th, Dover at the same time having gusts at the rate of 64 miles an hour. The passage of a deep cyclonic area across the Faröe in the last three days marked the most stormy period of the month. Lerwick, Wick and Malin Head experienced a strong gale on the 29th; Lerwick, Deerness and Castlebay on the 30th, Pendennis a whole gale, while Malin Head reported a storm (force 11) the anemometers recording gusts of 61 miles an hour at Quilty, 66 miles at Dwyran (Anglesey), 68 miles at Scilly, and 71 miles at Pendennis. On the 31st Malin Head and Nottingham had a strong gale, and Dungeness a whole gale.

The rainfall during this stormy fortnight was heavy in nearly all districts, there being scarcely a day without falls of an inch or more of rain. On the 20th, the fall was heaviest in Ireland, up to 1·3 in. at Newcastle (Wicklow); on the 21st in the southern half of England and Wales, up to 1·7 in. at Brighton; on the 23rd in northern Scotland and south-eastern England, 1·4 in. at Dyce (Aberdeen) and Hastings. The whole of England and Wales seems to have been affected on the 24th, the heaviest once more being in the south-east, 1·5 in. at Send, 1·8 in. at Watergate and Westbourne, and 1·9 in. at Eastbourne. Ireland and northern England had the heaviest on the 26th, up to 1·4 in. at Glenarm. The worst and most extensive storm occurred on the 29th, more than 1½ in. of rain falling in various parts of England, Wales, Scotland and Ireland, the heaviest, 2 in. at Kirkby Lonsdale and Colmonell, 2·1 in. at Inverary, 2·3 in. at Graythwaite, 2·5 in. at Eskdalemuir, 2·8 in. at Lickeen, Caragh Lake, 3·2 in. at Cruachan, 4·2 in. at Ambleside, while the gauge at Seathwaite registered 7 in. At Ardross the storm brought about an excessive flood. In the last week snow showers fell in many localities. At Sumburgh Head there was a deep fall in the night of the 26th. Local thunderstorms occurred on many days.

On the whole the temperature maintained a fairly uniform level during the month. The early days were unusually cold generally, and minima of 32° and below were recorded in nearly all districts on the 1st and 2nd. The 12th and 13th, and the 18th to the 20th were warm, with numerous afternoon maxima of 66° to 68°, at Sheepstor (Devon) 69° on the 12th, and about the 20th many of the night minima were above 55°, as high as 59° at Teignmouth, Jersey and Bognor. On the 26th and 27th, a number of northern stations had maxima below 40°, Sumburgh Head only 35°. It was not until the night of the 28th that a severe frost, lasting a few hours, was experienced, the shaded thermometer falling to 25° and under at a very large number of stations, to 20° at Nairn and Llangammarch Wells, 19° at Crathes and Eskdalemuir, 18° at Inch and West Linton, and 15° at Balmoral. This was followed by the heavy rain of the 29th mentioned above.

Aurora was noted at a few northern stations on the 2nd, 10th, 17th, 18th and 25th.

Coast fogs were experienced in many localities between the 11th and 21st.

The temperature of the coastal waters was several degrees lower than in September, as much as 9° between Eastbourne and the Shipwash, but the water was warmer than the air on shore, by 6° off the north-east of Scotland.

**Rainfall.**—In spite of the many heavy falls of rain after the 18th, the precipitation for the whole month was less than the normal, excepting in the south of Ireland, the Channel Islands and south-eastern England. Northern Scotland as a whole received only 53 per cent. of the average. Bendamph and Glencarron had 34 per cent., Dunrossness 35, and Fort William 50 per cent. On the other hand Kent and Sussex had excessive amounts, Margate 183 per cent., Dungeness 187, and Folkestone 209 per cent. The aggregates ranged from 1·3 in. at Brandon (Suffolk), and 1·4 in. at Dundee to more than 7 in. round Dover, 11·5 in. at Glenquoich, and 13·2 in. at Seathwaite. Rain was measured on 9 days at Donaghadee, and 10 at Dumfries and Ruthwell, against 24 at Cockle Park, Belvoir Castle, Cromer and Hillington, and 25 at Boston.

**Bright Sunshine.**—As a general rule the duration of insolation differed little from the average, but Llandudno had 136 per cent. of the normal, Blackpool 128, and Woolacombe 127 per cent., against Deerness 74 per cent., Durham 73, and Marchmont 70 per cent. Portsmouth, Worthing and Dwyran (Anglesey) totalled 131 hours, Woolacombe 129 hours, while Sheffield had 52, Baltasound 49, and Huddersfield only 48 hours.