

MONTHLY WEATHER REPORT OF THE METEOROLOGICAL OFFICE.

(Supplement to Weekly Weather Report.)

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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Normal in Temperature; Dry; Dull.

Throughout the month the atmospheric conditions over the British Isles were almost entirely of a quiet character, there being only one depression of considerable depth to produce a little boisterous weather over a fairly wide area. At the commencement of the month there were indications of a disturbance outside the Hebrides, but it passed away harmlessly next day, when another, track B, was seen to be approaching our south-west coasts. Following a north-easterly course its centre crossed Wales and the North of England, and by the evening of the 4th it was well out over the North Sea, when it suddenly altered its line of advance to the south-east, and passed away into Germany. During its passage across this country it was a well formed cyclonic system, but it was not attended by much wind, the only gale forces attained being in gusts—on the 3rd 20 m/s. at Scilly and 22 m/s. at Holyhead; and on the 4th 20 m/s. at Dyce, and 22 m/s. at Southport. It was, however, attended by some heavy rainfalls. The largest falls on the 2nd were 31 mm. at Newcastle (Wicklow) and Pen-y-gwryd, and 46 mm. at Scilly. On the following day thunderstorms were experienced over an extensive area, and in numerous localities the rainfall exceeded 25 mm., the principal amounts being 42 mm. at Hutton, 45 mm. at Lampeter, and 47 mm. at Giggleswick. A number of districts were visited by thunderstorms on the 4th, but there were no more rainstorms. Immediately in the rear of the disturbance an anticyclone of considerable intensity, the barometer eventually mounting to 1030 millibars and upwards, moved in quickly from the south-west, and soon embraced the whole kingdom. From the 5th until the 16th it remained the dominating factor in determining our weather, a disturbance moving eastward along the Arctic Circle, and whose southern margin spread down to our northern districts for a brief interval, having no further effect than a local Northerly gale at Nairn on the 13th, when gusts of 20 m/s. were registered at Aberdeen and Eskdalemuir. During this period of high pressure dry weather prevailed extensively, there being no rain in many parts of England on any of the 12 days from the 5th to the 16th, Torquay being rainless from the 4th to the 16th, and Bridlington from the 5th to the 17th.

The reports for the morning of the 17th disclosed a sudden change in the situation, the most pronounced disturbance of the month, track E, being found centred between Iceland and the Farøe. After passing to the neighbourhood of the Shetlands it took a more southerly course down the east coast of Britain, and disappeared across Belgium on to the Continent by the evening of the 19th. On each of the three days on which it was in our vicinity it occasioned a gale in several places, from between South and West on the 17th, when the depression was approaching, and from North-West and North on the next two days, many parts of the country being affected. The greatest estimated strength was felt on the 18th, when a strong gale (Beaufort force 9) was reported at Nairn, Malin Head, Donaghadee and Holyhead. Of the anemometrical records of gust velocities the highest were 25 m/s. at Paisley, and 26 m/s. at Edinburgh on the 17th; 26 m/s. at Southport, and 27 m/s. at Holyhead and Quilty on the 18th; and 24 m/s. at Scilly on the 19th. Some heavy local rainfalls marked the approach of the system on the 17th, when widely scattered stations registered 25 mm. and upwards, to 52 mm. at Lampeter, and 59 mm. at Pen-y-gwryd. Next day Lampeter measured another 29 mm., apparently the only considerable fall on this day.

While the disturbance was still over the North Sea there was another sudden reversal in the type of weather, a new anticyclone of great extent and considerable intensity, lying out on the Atlantic expanding over the whole of these islands and setting up another spell of dry conditions, so that between the 18th and the end of the month many stations had from eight to eleven days without any rain. The pressure distribution during this period, however, was not entirely anticyclonic. After the 22nd a depression made its appearance over the upper Atlantic not far from our western coasts, for nearly a week drifting to and fro outside the south-western coasts, and finally, on the 28th, track F, moving in across the Bay of Biscay into France, and disappearing over Central Europe. In the meantime the anticyclone moved leisurely along a curved path across the North Sea and the Baltic to Western Russia, then returned across Scandinavia to the region between Scotland and Iceland. From the 26th to the 29th thunderstorms were experienced in many parts of England, and on the 26th and 27th in Ireland also. As a rule these storms were not accompanied by heavy rainstorms, but on the 26th some southern stations measured over 25 mm., up to 40 mm. at Salcombe, 42 mm. at Teignmouth and 50 mm. at Ridgewell and Guernsey. Next day St. Ann's Head had 30 mm., and Birr Castle 34 mm.; on the 28th Falmouth 30 mm.;

and on the 29th Wilton (Salisbury) 38 mm. During the night of the 25th-26th the South-East wind attained gale force in the south and west of Ireland, a strong gale at Blacksod, with gusts of 25 m/s. at Quilty, and of 28 m/s. at Weaver Point.

Air Pressure.—For the whole month the mean distribution of pressure did not differ from the normal to any notable extent, the highest results being on the south-west coasts instead of along the South of England. The actual values, however, were everywhere considerably above the normal, by as much as 4 to 5 millibars, over Ireland and Scotland. The barometer attained its highest level, 1033 millibars, in the North of Scotland on the 9th, the lowest reading, 983 millibars, occurring in the same district on the 18th, showing an extreme range of 50 millibars, against 28 millibars in England North-West and the English Channel. From the isobaric lines on map 1, page 99, it will be inferred that winds from Westerly to Northerly directions were in the ascendant, but the varying positions of the month's high and low pressure systems accounted for a considerable proportion of winds from other quarters—in the south-west mainly Northerly to Easterly or South-Easterly.

Temperature.—There were no very striking contrasts in the temperatures registered during the month. The first week was a little milder than usual, and the second week a little cooler. In the third week there was a further diminution of temperature but this was more than made up for by the increase in the following week. For the whole period, therefore, the general results show no great divergence from the normal, only Ireland having an excess of .1a, while Britain had slight plus or minus differences. On several days the afternoon readings exceeded 29.4a, the highest values being recorded between the 6th and 8th, when a few widely scattered stations touched 29.7a, and Killarney 29.8a. On occasions the maxima were below 28.6a locally, as low as 28.3a at Wick on the 14th, and 28.2a at Nairn and Lerwick towards the close. Few stations experienced frost in the shade, but Balmoral and West Linton on the 21st, and Roden on the 24th registered about 27.1a. Night minima as high as 28.8a to 28.9a were rarely registered.

At Belper the mean temperature of the water of the Derwent was 28.6.3a, that of the air 28.5.4a.

Round our coasts the temperature of the sea surface water was about the same as that of the air on the Irish Sea, rather cooler off Cornwall, but somewhat warmer in other regions. Fog was reported on many sections of our coasts between the 3rd and 8th, and also during the last nine days of the month, but it was seldom noted in the intervening period.

Rainfall.—With two dry spells, aggregating about 20 days, and no widely prevalent rainstorms, the month's precipitation was deficient generally over Britain and Ireland, but the English Channel returned a moderate excess. Scotland North and West, and Ireland North had little more than half the usual quantity, while at individual stations Buchlyvie, Glasgow and Stronvar had only one-fourth. In the extreme west and north rain fell at a few places on from 20 to 22 days, but at many stations on less than ten days, five at Jersey and Montrose, three at Stronvar. At twenty-four stations where the records are divided into day and night amounts, the mean hourly rate of fall was practically the same for both periods.

At Kew Observatory the level of the underground water varied from 225 cm. above mean sea level on the 18th to 207 cm. on the 27th and 28th.

Bright Sunshine.—Cloudy dullness was one of the principal features of the month. The duration of insolation was very nearly up to the normal in Scotland East and England North-East, but all other districts returned a considerable deficiency, the loss exceeding an hour per day in as many as four districts, Ireland South showing a daily loss of 1 hour 20 minutes. The greatest daily losses at individual stations were 1½ hours at Rhyll and Tunbridge Wells, and nearly two hours at Greenwich and Newquay.

Aurora Borealis.—Auroral displays were witnessed at Dublin on the night of the 3rd, and on the following night at Stornoway, Glasgow, Holyhead and Seskin.

