

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 uncommonly long spell of unsettled atmospheric conditions which had been the most prominent characteristic of the past summer, came to an end at the close of August. With the advent of September there was a rapid and considerable change in the distribution of pressure. The anticyclonic system previously occupying the middle region of the Atlantic expanded north-eastward and embraced the entire area of the United Kingdom. Thenceforward, for a period of nearly four weeks, an anticyclonic type was maintained over these islands, the variations of pressure being unimportant throughout. Frequently the region of high barometer readings was of enormous extent, not only covering the British Isles and their immediate neighbourhood, but also stretching westward right across the Atlantic to Newfoundland and beyond, and eastward across the northern half of the European Continent. Pressure was consequently relatively low about the Mediterranean and beyond the Arctic Circle. The central space of the high pressure system was continually shifting its position, to east, west, north and south of these islands. The maximum barometer readings, about 30.5 ins., were recorded on the 16th and 17th, and 21st to 23rd, Blacksod Point rising to 30.57 ins. on the 16th. While the anticyclone ruled, only a few depressions of slight intensity came within the range of observation, and with the exception of a very shallow one which moved westward from Germany to Belgium and north-eastern France on the 13th and 14th they exercised little or no influence on our weather. During the last five days of the month the distribution of pressure assumed a somewhat less settled type, but the disturbances which affected the conditions at this time were small and of little energy. On the evening of the 25th a depression appears to have formed beyond the south-west of Ireland, in about 49° N., 14° W. It struck off immediately on a north-easterly course, and early next morning its centre was over Queenstown, the barometer having dropped quickly at Roche's Point to 29.58 ins. Pursuing a steady course the system filled up on the upper part of the North Sea on the morning of the 27th. Originating in the same position on the morning of the 28th a shallower disturbance followed almost the same path of progression, but after an existence of 24 hours it dispersed off the east coast of Scotland. Pressure remained relatively low outside our south-western coasts on the 29th and 30th, but the deepest depression of the month was one which made its appearance on the morning of the 25th, in 52° N., 30° W., and passed thence north-eastward between Scotland and Iceland, the barometer at Sumburgh Head descending to 29.55 ins. on the 29th. The range of pressure for the whole month was consequently remarkably small, little more than half-an-inch at Jersey and Scilly, and the largest, at Roche's Point, was less than an inch.

With the barometer descending to or a little below 30 ins. only in the last few days, the mean pressure for the month was considerably above the average in every part of the country. The lowest mean value was 30.11 ins. at Sumburgh Head; at nearly every other station it was 30.2 ins., and at Blacksod Point above 30.29 ins. On the Straits of Dover the excess above the average amounted to about 0.2 in., while generally over the western and northern districts it was more than 0.3 in., as much as 0.36 in. at Stornoway, and 0.37 in. at Blacksod Point. Northward the mean value diminished to 29.84 ins. at Isafjord, in the north-west of Iceland, and at the Azores it was 30.13 ins. The central space of the high pressure was thus situated to the westward of Ireland. As the pressure gradients were slight, the winds were variable in direction, mainly from some Westerly points over the northern half of the country, and Northerly to Easterly in the south. Under the circumstances there was a marked absence of winds of much velocity, there being few instances of more than a strong breeze at the telegraphic reporting stations. Wick, however, had the force of a gale from North-West on the 3rd, Yarmouth a high wind to a gale from North-East, and Dover a gale from North-West on the 14th, and Sumburgh Head a gale from West on the 30th.

As would be expected from the abnormal distribution of barometric pressure weather of the quietest character prevailed in all parts of the kingdom almost without a break. The most notable interruptions, and they were local, occurred at the commencement and in the middle of the month. A disturbance moving eastward near the south coast of Iceland in the opening days affected North Britain to some extent, and in the mountainous districts of western Scotland a few heavy falls of rain were registered, 1.6 in. at Gruline (Mull) on the 1st, and 1 in. at Cruachan (Loch Awe), and 1.4 in. at Ford (Argyll) on the 2nd. Of the amount at Ford 1 in. fell in 3 hours. On the morning of the 13th there were slight indications of the formation of a depression over Bavaria, on the northern edge of a disturbance centred over the Adriatic. The secondary was very shallow, but its influence extended rapidly westward, and by evening rain had spread to all parts of the Low Countries and across to the coast of Norfolk. In the course of the night the wind over the south-east quarter of England increased considerably from between North-West and North-East, and fairly heavy rain became

general over the eastern, south-eastern and inland counties, with thunder in several places. At Ridlington (Rutland) and Lowestoft the rainfall registered for the 14th was just over an inch, and several other stations measured more than $\frac{3}{4}$ in. for the 13th or the 14th, but the downpour was still in progress when observations were taken on the morning of the 14th, and allowance must be made for this fact in estimating the intensity of the fall. At Epsom, during a thunderstorm on the 14th, there was a violent downpour which yielded 0.3 in. of water in $2\frac{1}{2}$ minutes, or at the rate of $7\frac{1}{4}$ ins. per hour, and the observer remarks: "The intensity of the rainfall, coupled with the dryness of the ground, caused extensive flooding, the water coming off the higher ground in a small torrent, the surface drains being entirely unable to cope with it."

With these two exceptions the month was marked by exceptionally dry weather, many observers noting that it was the driest September in their records, some of these records being continuous through 40 years. Over wide areas there was no rain during the first twelve or thirteen days, and again for about a fortnight from the 15th, while in various districts in Ireland and Scotland none was measured during the fortnight, the 11th to the 24th. At Oldham Road, Manchester, there was none through 21 consecutive days, 3rd to 23rd, and at Prestwich through 22 days from the 3rd. This long spell of dryness enabled farmers, even in the more northern districts of Scotland, to harvest their corn under most favourable conditions, and numerous observers express satisfaction with the results.

Notwithstanding the unusual absence of rain, however, the weather generally was cloudy to dull, and with the wind frequently from polar directions, there was little disposition on the part of the thermometer to rise above the normal level. On the first three days there were in the more southern districts a few maximum temperatures about 70°, Swansea, Sandown, Southampton, and Rugby touching 72°, but this level was not attained again until near the close of the month, when there were many records above 70° from the 27th to the 29th, Greenwich, Westminster, Tottenham and Whitby attaining 75°, Camden Square and Raunds 76°, and Maidenhead 78° on the 28th. On the other hand, there were several days with maxima below 55°, as low as 49° at Glencarron on the 19th, which was a cold day in most localities, a sharp shower of snow with flakes of considerable size falling at Epsom, where the temperature at the time was 52° (late in the evening). On various dates night temperatures below 35° were registered at a number of stations, 30° at Balmoral on the 8th, and West Linton on the 16th, 27° at Eskdalemuir on the 16th, and at Llangammarch Wells on the 21st. Warm nights were uncommon, but temperature remained as high as 60° at Aberdovey on the morning of the 2nd, and at Bexhill-on-Sea and Shoeburyness on the 29th.

Aurora was seen at Baltasound on the 1st, 6th, 24th and 29th, and on the last-mentioned date at Eskdalemuir and Dublin, but there was a singular absence of thunderstorms, those observed on the 14th at Epsom, and on the 28th at Bromyard, Rochford (Worcester) and Oxford, being the only ones recorded.

Fog was almost of daily occurrence on some parts of the east coast; from the 1st to the 3rd, 8th to 11th, and 25th to 30th in the west; but on the last three days only on the south coast.

The temperature of the coastal water was about the same or a trifle warmer than in August along the south and east of Ireland and at Scilly, elsewhere it was colder, by as much as 4° off Eastbourne and St. Ann's Head. Except on the north-east coast of England and on the Clyde the water was warmer than the air, by as much as 5° off Bantry Bay.

Rainfall.—The month was one of the driest Septembers on record; the rainfall was considerably below the normal for the whole kingdom, the deficiency at individual stations ranging up to 4.4 ins. at Arlington, 5.1 in. at Glencarron, 5.2 in. at Fort William, and 9.9 ins. at Seathwaite, where only 1.4 in. was recorded. Only five stations in western Scotland reported aggregate totals of more than 3 in., Glenquoich 7.2 in., against 1.4 in. at Seathwaite. Nearly the whole of England and Wales had less than an inch, an extensive region less than half-an-inch, a considerable number of stations returning less than 0.2 in., Portsmouth, 0.09 in. Sumburgh Head had rain on 22 days, Stornoway on 21, and Baltasound on 20, but as a general rule the number of rain days was less than 10; at a large proportion of stations it was 5 or less, and only 2 at Portsmouth, Marlborough, Wokingham, Rugby, Bath and Edgehills Lodge, Forest of Dean.

Bright Sunshine.—The duration of bright sunshine varied a good deal even locally. Newquay had an excess of 40 hours, Fort Augustus and Phoenix Park, Dublin, of 39 hours, and Geldeston of 42 hours. The totals ranged from 196 hours (53 per cent. of the possible) at Newquay, and 194 hours (52 per cent.) at Ventnor, to 82 hours (22 per cent.) at Hull, and 67 hours (18 per cent.) at Newcastle-on-Tyne.