

## 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.**—During the period under notice the distribution of atmospheric pressure over the British Isles and the surrounding regions was almost continuously undergoing more or less important variations, arising from the widely different paths followed by the anticyclonic and the cyclonic systems. A high pressure system crossed the United Kingdom between the 4th and the 6th, the barometer rising above 30.5 ins. at the majority of stations, and exceeding 30.6 ins. in the south of Ireland and over the western portion of the English Channel. Subsequently the anticyclone travelled away to the Black Sea. The central space of another anticyclone crossed the northern parts of Britain on the 13th and 14th. In it the barometer rose above 30.5 ins. over nearly the whole kingdom, exceeding 30.7 ins. in the north of Scotland. The highest record for the month, 30.81 ins. at Sumburgh Head, occurred on the 14th. The system afterwards followed an easterly path to the Baltic and Russia. In the second half of the month anticyclones were found mainly over Continental countries, from Scandinavia round to the Spanish Peninsula, but towards the close of the month a high pressure area appeared near Iceland, and moving southward, passed the Hebrides and Ireland on the 30th and 31st. The cyclonic disturbances, with the exception of one at the close of the month, were of little depth. On the evening of the 1st a "V"-shaped depression was developed on the Atlantic, in about 52° N., 16° W. Moving eastward it reached the St. George's and Bristol Channels by the evening of the 2nd. The heaviest rainfalls which it produced in our islands were 1.9 ins. at Caragh Lake, on the 1st, and 1.6 ins. at Douglas, Isle of Man, next day. At Basingstoke, on the 1st, 0.15 in. of rain fell in five minutes, and at Epsom 0.25 in. in four minutes. With the approach of the disturbance the wind increased very decidedly, and during the 2nd the force of a gale was attained in various parts of England and Ireland, and storm forces at Portland Bill (S.W. 10), and at Scilly (W.N.W. 11). At Fleetwood the anemometer registered 48 miles of North-West wind in an hour, at Pendennis 47 miles from West, with gusts of 67 miles per hour, and at Scilly 59 miles, with gusts at the rate of 70 miles per hour, while Roche's Point, Southport, Holyhead, Llaneugrad (Anglesey), Plymouth, Brighton, Dover and Shoeburyness had gusts at the rate of 56 to 61 miles an hour. A remarkable feature of this severe gale was its sharply defined southern limit—on the Channel, along the fiftieth parallel, only strong to high winds (forces 6 to 7) were experienced.

Another "V"-shaped depression appeared off the south-west of Ireland on the evening of the 10th. Two days later its minimum was shown near the Straits of Dover. From this point it moved westward along the Channel. On the following days low pressure prevailed over the Bay of Biscay. After the 16th the system moved on a north-easterly course across Wales and England, and disappeared over Finland after the 19th. Associated with this system of disturbances were very heavy rains in many localities, on the 11th, 1.7 in. at Barnstaple, and 1.8 in. at Bethesda; on the 12th, 1.7 in. at Ventnor, and 1.9 in. at Arlington; on the 13th, 1.7 in. at Guernsey; and on the 16th, 1.1 in. to 1.7 in. over the Forest of Dean. Between the 12th and the 15th, North-Easterly to Easterly strong winds and gales were experienced in the southern counties, force 9 in London on the 13th, and force 10 at Dungeness and Portland Bill on the 14th. The anemometer at Holyhead registered 48 miles of wind in an hour from East on the 13th, and Pendennis 57 miles from North-East (in squalls 72 miles per hour) on the 14th.

A disturbance which was approaching our western coasts on the morning of the 18th, after passing over the North Sea to near the Danish coast, suddenly changed its course and reached the north-east of France by the evening of the 20th, finally disappearing on the Adriatic. While in our neighbourhood it was accompanied by strong or high winds pretty generally, a whole gale from North at Malin Head and Scilly on the 20th. Its progress was marked also by very heavy rain in several districts. On the 14th the measurements ranged up to 1.4 in. at Darwen, and next day up to 1.5 in. at Ruthin, while on the 20th, as the centre moved down near the Straits of Dover, there was a tropical downpour over the eastern half of Kent, 1.6 in. at Dungeness, 1.8 in. at Sandgate and Kearsney, 2.2 ins. at the Dover Water Works, and 2.4 ins. at Dover.

On the morning of the 21st a disturbance was shown in 54° N., 25° W. Its progress eastward was slow. It appeared off the south-west of Ireland on the evening of the 24th, and off the west coast of France on the morning of the 30th. It dispersed over western Germany on the following day.

From the 26th to the 28th it caused high Easterly winds in many parts of England, a gale at Scilly and Spurn Head, a strong gale at Portland Bill, and at Pendennis a velocity of 51 miles in an hour was attained, with squalls of 65 miles an hour. The heaviest rainfall occurred over south-western England on the 27th, an inch or more at several stations, 1.3 in. at Paignton, 1.4 in. at Torquay.

On the morning of the 30th pressure was falling briskly at the Iceland stations. The system causing the change moved quickly on a south-easterly course. By the evening of the 31st its centre was already near Shetland, and the influence of the depression had extended to every part of the British Isles. The barometer fell at a great rate, dropping below 29.5 ins. at nearly all stations, below 29 ins. at all in Scotland, and touching 28.68 ins. at Sumburgh Head. A decided increase in the force of the South-Westerly to Westerly wind was the result, a gale blowing in several districts, a strong gale at Portland Bill, and a whole gale at Malin Head and Spurn Head. In squalls velocities of 56 miles an hour were registered at Scilly, 59 at Southport, 62 at Llaneugrad, and 68 miles per hour at Roche's Point. Heavy rain was experienced over the greater part of the kingdom, more than an inch falling at many stations in Britain, up to 2 ins. at Ford (Argyll), Fort William and Glencarron, 2.2 ins. at Kinlochewe.

For the whole month the mean distribution of pressure differed widely from the normal. Instead of a gradual increase in the values from north to south, the highest mean pressure, above 30.1 ins., was shown in an area having its central space on the eastern side of the North Sea, which extended westward across these Islands. Off the mouth of the English Channel the mean pressure was below 29.95 ins., and north-west of Iceland it was below 29.75 ins. The prevailing winds were, therefore, Easterly over our southern districts, much more variable further north. At Sumburgh Head the pressure for the month was as much as 0.31 in. above the average, the excess diminishing southward to 0.05 in. at Scilly. The range of pressure exceeded 2.1 ins. at Sumburgh Head, and 2 ins. at Nairn, against less than an inch in the south of England.

Mildness was a feature of the month, the mean temperature showing an excess at nearly every station, and in several localities it was more than 4° above the normal. On the 1st and 2nd maxima of 70° and upwards were recorded in many places, 74° at Cromer, East Ham and Maidenhead, and 75° at Colwyn Bay. Minima of 32° and under occurred on varied dates, 28° at Markree on the 31st, but as a rule the extremes were within moderate limits.

Aurora was reported, mainly in Scotland, on 1st, 4th, 5th, 6th, 8th, 9th.

A heavy shock of earthquake was felt at Scilly at 8.2 a.m. on the 30th.

Fog was of almost daily occurrence on various parts of the east coast, but in the west it was reported principally from the 6th to the 8th, dense in places, and on the south coast on the 1st, and the 8th to the 10th.

The temperature of the coastal water showed a decrease on the September records, as much as 5° lower off Plymouth and the mouth of the Shannon, and 6° off Bantry Bay. The water was, however, warmer than the air on shore, by 3° or 4° in some neighbourhoods.

**Rainfall.**—In many localities the dry weather of the second half of September was maintained, with the exception of a break on October 2nd, until October 10th. Although there were considerable falls of rain afterwards, only southern England and the Channel Islands had an excess for the month, Falmouth returning 3.1 ins. more than usual. At many stations the deficiency was more than 2 ins., at Bendamph (Loch Torridon) as much as 5 ins., and at Seathwaite 6 ins. There were numerous aggregate totals exceeding 5 ins., the largest being 10.9 ins. at Glenquoich, and 12.7 ins. at Seathwaite. Few stations had less than an inch, Fortrose, Ross-shire, only 0.6 in. The number of days with precipitation ranged from five at Cawdor, and six at Cargen to twenty-two at Killarney and Salisbury, and twenty-seven at Roche's Point.

**Brigh Sunshine.**—In the north of Scotland there was a moderate excess of sunshine, but elsewhere there was a general deficiency, an hour or more per day at a number of stations, the aggregate loss at some southern ones exceeding 40 hours, 45 at Cirencester, 46 at Marlborough, and 47 at Ventnor. The largest totals were 125 hours (38 per cent. of the possible duration) at Guernsey, and 121 hours (37 per cent.) at Jersey; the smallest, 48 hours (15 per cent.) at Bunhill Row, London, and 40 hours (12 per cent.) at Birmingham.