

## 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, WITH A CHART OF RAINFALL CONTRIBUTED BY THE BRITISH RAINFALL ORGANISATION.

ISSUED BY THE AUTHORITY OF THE METEOROLOGICAL COMMITTEE.

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## GENERALLY, DRY AND BRIGHT.—WARM, THEN COOL.

The **general state of the weather** was dry, except between the 8th and 20th, with a high temperature during the first fortnight and colder conditions subsequently, while the sunshine, except in some parts of Ireland and Scotland, was more often above the normal than below it. High winds and gales were rather common during the unsettled cyclonic period, but the gales were not very severe.

With the exception of July the **mean pressure** for every month since March has been rather **above the average**, and it will be seen from map 1 on page 99, that September followed the same rule. It will be seen also that although the general trend of the isobars agreed very closely with the normal, the barometric gradient was a little steeper. Both the cyclonic and anticyclonic periods were more permanent than is generally the case in early autumn, and although the longest uninterrupted spell—the 8th to the 19th—was cyclonic, the type during the month, as a whole, was anticyclonic. The high pressure systems were often of considerable intensity, the barometer exceeding 1025 millibars over a wide area, and occasionally touching a higher figure, and on the other hand few of the depressions attained any great depth while passing over these islands or their immediate neighbourhood. The highest pressure occurred in the south of Ireland on the 27th, when the mercury reached 1,033 millibars. The readings were, however, only a trifle less high over the Midland Counties on the 30th. On some occasions the barometer fell to about 990 millibars in Scotland, and on the 14th it descended as low as 978 millibars in the north of Scotland. In the south-west of England pressure reached its lowest point on the 14th, falling to 982 millibars.

The **first week** was mainly **anticyclonic** and the wind variable or Easterly, but the extreme south-west of England and the south of Ireland came under the influence of a depression, and on the 4th or 5th thunderstorms were experienced in Devon, Cornwall and the Channel Islands, and on the following day copious rain fell on the south and south-west coasts of Ireland. On the 7th further thunderstorms occurred in the south-west, yielding 1.5 in. of rain at Penzance and 1.2 in. at Fowey. After that date the depression assumed a more definite form—track A on map 2—and dominated the weather over the whole Kingdom. Subsequently it travelled slowly in a general easterly direction until it lost its identity over the Channel on the 10th. Its effect on the rainfall was very marked. Its passage eastwards was attended by thunderstorms in numerous places in the south and west of the Kingdom on the 8th, over a much wider area on the 9th, and at a few stations on the 10th. Rain measurements exceeding an inch were recorded in many western localities on the 9th; as much as 2.2 in. at Sidmouth, 1.9 in. at Mungret, Limerick, 1.6 in. at Kirkby Lonsdale, and 1.3 in. at Stonyhurst and Torquay. The centre of the next depression—track B—moved in a north-easterly direction to the northward of these islands, but the system, with a secondary further south, affected greatly the winds and weather over the whole Kingdom. **Gales from the Westward** sprang up on various parts of the western and southern coasts on the 11th or 12th, the gust velocity reaching 23 m/s at Quilty and Holyhead, 24 m/s at Dover, 29 m/s at Pendennis and 30 m/s at Southport. Rain was general and in places heavy; at Bolton, Macclesfield, Darwen, and Buxton the fall on the 12th exceeded 1.1 in. A **secondary** disturbance—track C—that **increased quickly in intensity** as it moved rapidly from Wales across Belgium to Germany, influenced the Continental weather more than that in this country. On the 14th the centre of a large and **deep depression**—track D—passed across the north of Scotland, and on this occasion the wind increased to a gale from South-West or West on almost all parts of our coast. Among the highest gust velocities were 23 m/s at Alnwick Castle, 25 m/s at Carnforth and Paisley, 28 m/s at Aberdeen, 29 m/s at Eskdalemuir, 30 m/s at South Shields and Holyhead, 31 m/s at Quilty and 40 m/s at Southport. Further rains were general over these Islands, but the quantity was nowhere very large, and in the rear of the disturbance, on the 15th, the weather was fine and bright. A depression, at first of a "V"-shaped character—marked E on the map—which travelled east-south-eastward from Scotland across the North Sea on the 17th, caused heavy falls of rain and nearly as much wind in these Islands as its immediate predecessor. On the 16th or 17th rain measurements of more than an inch were registered at some stations in all districts; at Southport and Darwen 1.4 in., Sedbergh 1.7 in., St. Annes-on-the-Sea 2.2 in., Cahir 1.5 in., Fort William 1.7 in., and 2.8 in. and 3.3 in. respectively at Bungalow and Pen-y-Gwryd. The gale, between South-West and West, veering to North-West, was less widespread than that preceding, but was experienced on many exposed parts of the coast. The greatest gust velocities were 27 m/s at Spurn Head, 23 m/s at Gorleston, Dover, and Brighton, and 24 m/s at Pendennis. Like the secondary depression of the 13th the **system became much deeper**

as it approached the eastern shores of the North Sea, and the weather accompanying it in that region and over the Baltic was a good deal more disturbed than in this country.

With the departure of this system an **anticyclone** extended over the United Kingdom from the south-west and west, and the North-Westerly and Northerly winds, which had brought a decided fall of temperature, became light and gradually died out, while as the anticyclonic centre passed over these Islands to the North Sea and the Continent, a gentle breeze from some Southerly or South-Westerly point extended over this country, and caused temperature to increase. By the 27th, however, the pressure distribution had again undergone considerable modification. The highest pressure had been translated to the south-west of this country and at the same time a large depression had appeared over the north of Scandinavia, while the wind over these Islands returned to West or North-West. On the following day a **secondary** disturbance which **developed increased energy** during its passage from Shetland to Norway,—track G—caused a much steeper gradient, and high winds and gales from West or North-West prevailed in the more northern parts of the United Kingdom. Late on the 27th gusts of the velocity of 26 m/s or 27 m/s occurred at Paisley and Rosyth, and on the 28th Aberdeen recorded 24 m/s and South Shields 28 m/s. This reversion to a cyclonic type proved very brief, and by the 29th the **anticyclonic** centre had **again** become established over these Islands and their neighbourhood. The extreme north of Scotland, however, came under the influence of a depression far to the northward which contributed largely to the total rainfall in that region. At Loch Stack on the 30th there was 2.8 in. and at Melvich 1.1 in.

**Temperature** just equalled the average in Scotland East, but in all other parts of the Kingdom there was an excess, although it was very slight in England South-East. The highest readings of the month occurred on the 2nd or 3rd at most stations; at Woking there was a **maximum of 84°**. The lowest values were recorded on various dates after the 20th. Frost was experienced at least once in all districts except the English Channel, the **lowest reading** being **22°** at West Linton, near Peebles, on the 22nd. The temperature was nearly as much below the normal in the last fortnight as it had been above it in the preceding two weeks. For some days the maxima were below 60° over a large portion of the Kingdom, and at several stations in the north they were below 55°. Towards the end of the month there was some recovery of temperature, and the thermometer again rose to 70° in a few places. The temperature of the **Sea Surface Water** was nowhere very different from that of the air, and coastal fogs were not frequent. Until the 10th, however, they were experienced along considerable stretches of the western coasts, and again locally in that region between the 22nd and 25th. The east and north-east coasts had few visitations.

**Rainfall** was slightly above the average in Scotland West and Ireland South and considerably in excess in the English Channel, but over the Kingdom generally there was a **marked deficit**, the percentage of the average being as low as 67. In the east of Scotland and large areas in England and Ireland the fall was especially slight; at Braemar there was only 27 per cent. of the average, at Leith 28, Nottingham 29, and at Donaghadee 31. A few localities in the far south-west and north-west, and some places in Lancashire had an excess. At Guernsey the percentage was 134, Valencia 114, Stornoway 116, Southport 113, and Stonyhurst 130. Over a very large area there was no rain before the 9th and none after the 18th, while at Newcastle, Co. Wicklow, the drought began after the 15th and the total amount of rain was only 0.48 in. Several places in the east of Great Britain and in eastern Ireland had rain on 4, 5, or 6 days only. The observer at Dyce commented—"Rivers Don and Dee lower than they have been at this season for very many years. Farms in neighbourhood very short of water. Wells dry." The Oundle observer noted—"A very dry, sunny month; springs and brooks very low."

**Bright Sunshine** was abundant except in the south-west of Ireland, the English Channel districts, and the far north of Scotland. Over the greater part of the Kingdom the excess over the average was more than 1 hour per day, while in many districts it equalled 1.5 hour, and in the south-east of England exceeded 2 hours. At Westminster the mean was as high as 153 per cent. of the average, at Hodsock 150, St. Leonards 148, Brighton and Strelley 147, Marchmont 146, and at York 145. At Jersey, on the other hand, the figure was 98 per cent., at Valencia 92, and at Deerness only 83.

Over a large portion of the country **remarkable sunsets**, indicating an excess of dust in the air, were observed after the 20th, and on the evening of the 27th a magnificent band of auroral light, resembling the immense tail of a comet, was observed at Dublin.