

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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Warm; Dry at First; Bright in West, Dull in East.

The weather of the earlier part of the month was influenced by an anticyclone, the centre of the system being either directly over these Islands or in their neighbourhood. By the 11th, however, a large depression on the Atlantic was encroaching on our western coasts, and causing rather heavy rain, with increasing Southerly winds, in the west of Ireland, and by the following day its effect had extended to England. From the 14th till the 17th a depression of moderate intensity, marked A on the map, travelled from beyond the north-west of Scotland to the south-east of England. Its progress was marked by thunderstorms over a wide area and heavy rain locally. At Hovingham on the 14th the rain measured 36 mm., at Burnley on the 15th 34 mm., at Cullompton on the 16th 33 mm., at Eye on the 17th 55 mm., and at Cheshunt 89 mm. The barometric gradient was seldom steep enough to allow the wind to be stronger than a fresh breeze, but some of the gusts on exposed parts of the western coasts attained gale force before the centre of the depression reached this country. After the departure of the depression on the 18th small pressure irregularities caused local thunderstorms and some heavy falls of rain; at Wantage and Meltham the fall was 38 mm. A brief return to fine, bright conditions was brought to most parts of the country after the 20th by the temporary extension north-eastward of the Azores anticyclone, but on the 23rd a depression on the Atlantic caused a reversion to unsettled weather in the west. This depression, track B, subsequently moved in a north-easterly direction to the North Sea, and was accompanied by further heavy rains in several places and thunderstorms locally. With the wind mainly between South-East and East in Scotland on the 25th there was 44 mm. of rain at Glasgow, about 35 mm. at Cardross and Bargrennan, and 55 mm. at Dyce. With the South and South-West winds, 52 mm. fell at Heathfield on the 25th, and 32 mm. at Ardingly and Alnwick Castle on the 26th. Thunderstorms were again reported over extensive areas in England on the 27th, and at Shaftesbury yielded 34 mm. of rain. Small secondary disturbances maintained the unsettled weather during the 28th, and at 18h. on that day a cessation of the barometric rise at the mouth of the English Channel was the first indication of the formation of a depression (track C) that subsequently developed sufficient energy to cause a gale on several parts of the coast and abnormally heavy rains in several localities in the southern half of England. As the centre moved rather slowly up the Channel during the evening and night of the 29th, the rain accompanying the East winds exceeded 25 mm. generally in the southern counties, and 50 mm. at a number of stations. Torquay and Portland Bill reported 99 mm. The wind blew a gale from some Easterly or Northerly point on the 29th on most parts of our south coast, and on the 30th on the coast of East Anglia, and a Westerly gale at Jersey. The depression travelled away quickly to Denmark and the Baltic.

Rainfall.—The drought, which began in July, continued throughout the first 10 or 11 days of August over a large portion of the Kingdom. In numerous places it had lasted 25 days; at many stations 26 to 28 days, Plymouth 29 days, and Totland Bay 30 days. In Ireland the rainless period lasted 25 days at Seskin and 27 days at Ballinacurra. The number of days with rain during the month was less than 12 in several parts of England and Scotland; at Canterbury and Guernsey it was only 8.

Over Great Britain the total fall was very irregularly distributed. In Scotland East and the southern districts of England the fall was above the normal, while in Scotland North and West and England North-West and North-East it was below the normal. At all stations in Ireland, except Markree Castle and Killarney, it was less than the normal. At Stornoway the percentage of the average was only 29. At Westminster, on the other hand, it was 253, and at Portland Bill 255. The chief downpours within a brief space of time were 28 mm. in half an hour, with thunder and lightning, at Blundellsands during the early morning of the 14th, and 52 mm. in 2½ hours at Eye on the 17th. At Benson on the latter day a thunder shower yielded 5·4 mm. in 3½ minutes, and another 13 mm. in 23 minutes. On the 29th 5 mm. fell in 4 minutes at New Malden. At stations measuring rainfall twice within 24 hours the mean rate of fall during the daytime was rather greater than that of the night.

At Kew Observatory the underground water-level varied from 206 cm. above Mean Sea Level on the 14th to 216 cm. on the 21st and 22nd.

Air Pressure.—The general distribution was anticyclonic until the 11th, cyclonic from the 12th to 17th, and also after the 24th. From the 18th to 23rd the United Kingdom lay between an anticyclone on the Atlantic and cyclonic systems beyond the North Sea. The highest readings of the month occurred on the 3rd, 4th, or 5th, when 1,032 or 1,033 mb. was reached in Scotland North and Ireland. The lowest readings were on the 29th-30th, England South-East and South-West recording 989 mb., and the English Channel 986 mb. In most other districts the barometer was lowest on the 26th. The mean height of the barometer was above the normal, except in the south of England and on the Channel, and the mean range of pressure considerably less. It will be seen from map 1, page 87, that the mean distribution was more in favour of South-Westerly winds than usual.

Temperature was consistently above the normal until toward the end of the month, but while the excess was considerable in Ireland and the western half of Britain, and moderate in England South-East, it was slight in the north and east of Scotland. The warmest period was the first week, when nearly every part of the Kingdom recorded its maximum. At Wantage the value was as high as 30·3a, at Woking and Killarney 30·2·5a, at Durham, Kelso, and several stations in southern England 30·2a. In a few localities the minima were also high—about 28·8a—but the warmest nights were a week or so later, while some places in southern England again experienced high minima on the 25th or 26th. Night readings above 28·8·5a were common on the 12th, 13th, and 14th, the highest values being 29·1a at Aberdovey, 29·1·5a at Penzance, and 29·2a at Manchester.

The Northerly and Easterly winds towards the end of the month caused a great reduction of temperature. At some places in South Wales the maxima on the 29th were only 28·6a, while at numerous places in England they were below 28·8a. The lowest of the minima were experienced late in the month. At Perth and West Linton on the 29th the reading was 27·3·5a, and at Mayfield (Staffs) on the 31st 27·4·5a. On the grass the thermometer descended to 27·1·5a at Hampstead on the 21st and at Raunds on the 31st, and to 27·2a at Benson and Raunds on the 5th.

At Belper the mean temperature of the water of the river Derwent was 28·9·6a, and of the air 28·9·1a.

The temperature of the sea surface water was a little below that of the air off the north and north-east coasts, and somewhat above it off the south-east coast; elsewhere it was about equal to it. Coastal fog was very prevalent on the western Channels, except between the 14th and 20th, and it prevailed at many places along the north-east coast of Great Britain from the 8th to the 17th. On the English Channel it was seldom experienced except between the 10th and 14th.

Bright Sunshine exceeded the normal in Scotland North and all the western parts of the Kingdom, but was below it in all the eastern districts. In Scotland East and England East the mean daily defect was more than 0·5 hour, while in Ireland South, England North-West, and Scotland West the mean daily excess amounted to a similar value. At Lowestoft the percentage of the normal was as low as 77, at Aberdeen 79, Bath 82, and at Kew, Greenwich, and Cambridge 85. At Llandudno the corresponding value was 121, Fort Augustus 122, and at Valencia 129.

Halo Phenomenon.—On the 14th, at 17h. 45m. G.M.T., an arc of upper contact to the halo of 46 degrees was observed at Eskdalemuir. The coloration of the arc was exceedingly brilliant, both the red and the blue being easily distinguishable. At 17h. 50m. part of the 22 degree was noticed; this was very faint. Both arcs had faded away by 18h.

Aurora was seen from Stornoway on the 23rd, Blacksod Point, Seskin, Sparkhill, and Eskdalemuir on the 27th, and from Deerness on the 29th. A **Parhelion** was observed from South Farnborough on the 3rd, and a **Sun Pillar** from Tenbury on the 23rd. A **Waterspout** was seen off Kingstown on the 31st.

