

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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Bright and generally mild. Very dry except in the North-East of Scotland and South-East of England.

Very few depressions sufficiently well defined for their movements to be depicted on the map, page 99, passed over or in the immediate neighbourhood of these Islands, but the extreme western and north-western districts occasionally came under the influence of a disturbance far out on the Atlantic, and from time to time small, local pressure irregularities directly over the country affected the weather in their immediate vicinity. As the month commenced a depression that caused very general rains and many thunderstorms, track A on the map, was passing eastward across our northern districts, and although it had soon passed away beyond the North Sea, further rains and local thunderstorms accompanied the unsettled Northerly type of weather in its rear. On the 1st between 25 and 53 mm. of rain fell in Snowdonia, and 28 mm. at Littlehampton, and on the 3rd there was 45 mm. at Dover. By the morning of the 5th, however, a well-marked anticyclonic system had extended over the United Kingdom from the south-westward bringing light winds and fair, bright weather. The central region of this system at first moved eastward; by the 8th it covered the North Sea and extended to Scandinavia, and with slight modification it continued to occupy that region until the 12th, when it travelled away to the southward. The general character of the weather during this spell of light winds—variable or South-Easterly to Easterly—was rainless and extremely bright. The week ending on September 11th proved more sunny in these Islands as a whole than any since the third week in June.

Depressions travelling east north-eastward beyond our north-western and northern coasts between the 13th and 17th caused rain over a large area in the west and north, but most places elsewhere were unaffected. The next change in the pressure distribution came about rather suddenly early on the 18th by the extension southward of an anticyclone from beyond Shetland. This continued to increase in intensity and to move southward and eastward, and brought fine weather, with gentle breezes from South-east and South to these Islands. As the system became more distant, however, our northern and western coasts were increasingly influenced by Atlantic depressions, and after the 21st several stations experienced rain. Many places in Ireland reported heavy falls—Valencia 52 mm. on the 22nd. Late on the 24th a small depression developed in the south of England and moved northward—track E on the map. During its passage, which was at first rather quick and then slow, it increased in intensity and gave the heaviest rains of the month in most parts of Great Britain. At Southampton on the 24th the measurement was 51 mm., Bucklebury 41 mm., Basingstoke 37 mm., and at Totland Bay as much as 65 mm.; the largest quantity at that station in one day during the past 28 years. In the north-east of Scotland, round about Moray Firth, where the rain fell with a North-Easterly and Northerly wind, on the 25th the amount was abnormal. At Fortrose the value was as high as 103 mm., Inverness 92 mm., Rothiemurchus 85 mm., and at Nairn 96 mm. followed by 43 mm. on the 26th. The 96 mm. at Nairn is a "record" at that station. Hitherto the maximum fall at Nairn on one day was 49 mm., which fell in October, 1906, and on that occasion the wind was also Northerly to North-Easterly accompanying a small depression of increasing intensity. After the 26th the depression moved away rather quickly eastward to Scandinavia. On the 28th another depression, track G, appeared over our south-western districts, and spreading and moving rapidly eastward, it caused further rains over the Kingdom generally. Over the southern parts of England the fall was very heavy. In the metropolitan area the measurement was about 40 mm., at Margate 60 mm., Newick 48 mm., Warlingham and Geldeston 45 mm., Chelmsford 42 mm., Dover, Wallington, and Heathfield 41 mm., and at many other places more than 30 mm. Local thunderstorms were experienced in the midlands on the 25th and in the west and south-west on the 29th. In the rear of the depression of the 25th the wind blew a gale from the North-Eastward on exposed parts of the north and north-west coasts, and gales occurred at times on the few days following.

Barometer.—The distribution of mean pressure differed widely from the normal, and the range of pressure was less, while the mean level of the barometer was higher than usual, especially in Scotland. Except in the extreme west and north-west of the Kingdom the distribution of pressure was anticyclonic. Although the mean height of the barometer was above the normal no exceptionally high readings were recorded. In England pressure reached its maximum on the 6th, the readings being 1,030 and 1,031 millibars, and a similar level was reached in Scotland on the 10th and 11th. In Ireland the highest point, recorded on the 16th, was a little lower. Very low readings were equally rare. In most parts of the country the minimum readings occurred with the depression of the 29th, the lowest values then being 991 millibars in the south-east.

Rainfall.—Over the Kingdom generally the rainfall was slight, the percentage of the average being no more than 64, but in Scotland East there

was a large excess, and in England South-East a small excess. In Ireland and the north of Scotland rainy days were rather numerous, but elsewhere they were few for the time of year. At many stations in Yorkshire and the midland counties, and at some in the north-east, east, and south-east rain fell on only four or five days. An unusual feature of the rainfall was that the total was larger in the east than in the west of Great Britain. Over a very large area in England there was no rain for 12 or more consecutive days; at several stations there was absolute drought for 14 days or more, while at Bucklebury and Holme-on-Spalding-Moor it continued for 21 days. At Liverpool and Blackpool the percentage of the average fall was only 15, at Rhyl 17, Stonyhurst 18, and at Greenock 29, while at Totland Bay it was 151, Margate 177, Gordon Castle 221 and Nairn 285. The measurements at 19 stations where observations were taken twice a day, at 9 a.m. and 6 p.m., showed that rather more rain fell during the night than during the daytime, but that the results differed greatly at individual stations.

The level of the underground water at Kew varied from 218 cm. above M.S.L. on the 1st, and 198 cm. on the 24th. The observer at King's Somborne noted "the water in my well continues to fall at the rate of about 1 in. per day."

Temperature.—As a whole temperature was above the average except in England South-East, where it was a small fraction of a degree below it; in Ireland the excess was nearly 2°. The weather was cold for the time of year both early and late in the month, but most of the time during the intervening period was warm. The week ending on the 18th, when most of the absolute maxima occurred, had a higher mean temperature over England and Ireland than any week in July. In England and Ireland the highest maxima were registered during the prevalence of light westerly or variable airs and a good deal of sunshine between the 16th and 18th. At Tottenham and Woking the thermometer touched 80°, at Bude 79°, and at several other stations 77° or 78°. In Scotland the warmest day occurred earlier in the month with a light Southerly wind, the highest value being 78° at Logie Coldstone on the 8th. Until the 5th the maxima were several degrees below the normal—below 65° over the Kingdom generally, and below 60° in places—and at the end of the month they were abnormally low. On the 28th, 29th, and 30th the temperature remained below 55° over a large portion of the Kingdom. At many stations on one of these days it failed to reach 50°.

In some localities the absolute minima for the month occurred with the cold spell of the first week. On the 3rd there was a minimum of 31° at Clongowes Wood; on the 4th the thermometer fell to 31° at Llangammarch Wells and to 32° at Rounton, and on the 5th to 31° at Mayfield and to 32° at Bawtry. Besides these and a few other less notable exceptions, however, the minima were lowest with the cold Northerly wind at the end of the month. Readings below 32° were common in the north and midlands. At Scaleby on the 28th the minimum was 25°, and at Kilmarnock and Wolfelee respectively on the 29th the values were 24° and 26°. At Wellington on the 30th the minimum was 24°. As a rule the diurnal range was not great for September. During the warm spell at the middle of the month the minima were very high for the time of year; readings above 55° were recorded at numerous stations, and on the 17th a few places had minima above 60°; at Kew and Clacton-on-Sea the value was 63°.

The mean temperature of the river Derwent, at Belper, was 57·0°, and the mean temperature of the air 55·3°.

The mean temperature of the sea surface water was 1° or 2° lower on most parts of the coast than during the preceding month, and did not differ materially from the normal. Coastal fogs were rare early and late in the month, but were rather frequent on many parts of the western coasts between the 7th and 24th, and were occasionally reported from Shetland. On the east and south coasts there was very little fog.

Bright Sunshine.—In all parts of the Kingdom the duration of sunshine was in excess of the average. In most British localities the mean exceeded the average by more than 1 hour per day, and in England North-West by 1·5 hour. At Westminster the percentage of the average was 148, at Hoylake 147, Blackpool 145, Harrogate and Newton Rigg 141, and at Birmingham 140. In all districts except England South-West, Ireland South, and the English Channel the mean amount per day was greater than that recorded during August. In Scotland North and Ireland North it exceeded the August duration by 1 hour per day, and in England North-West by 1·3 hour. In the northern parts of Ireland and Scotland there was more sunshine than in July.

Aurora was observed in the west and north of Scotland and at Carrick-on-Suir on the 30th.